

54 cents

Presented to
The Chester County Medical Society,
By Wm Darlington.

In Templum Medicinæ^{medicinæ}
non licet intrare
nisi Pulsus Comprehenditur.
Rush.



Things

holds Article 7.

Not out of my
Hand

Notes

taken from Doctor Rush's Lectures,
upon the Institutes, and
Practice of Medicine,
and on

Clinical Cases:—

"Let no Man enter the Temple of Medicine who is
not acquainted with the Pulse." Rush.

By Wm Darlington, Student of Medicine.

Volume First

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Notes, &c. — 11 Notes —

November 10th. — Doctor Rush's introductory Lecture was on the subject of Hospitals: In compliance with the request of a Friend, he undertook to describe what he conceived to be the best plan for a Receptacle of Friendless Sick. In the first place, he recommends, that, in our latitude, the building be erected on high, airy ground, of a southern exposure; and convenient to a copious source of pure water: — It should be two stories high, and, instead of a cluttered garret, which has been known to generate a species of Typhus fever, should have an airy, and neat attic story, plastered with lime. It is better, he thinks, to have the windows large and few in number; being on that account both warmer in winter and cooler in summer. The fever wards should have earthen or ground floors; and all the wards arranged so as that the tenants of them may not incommode each other. —

If the site be properly adapted to the sun =
= pose, the water should be conveyed into
the upper stories; for the doctor lays great
stress upon air and Water. The operating room
should be at a distance from the sick
wards; and in the form of an Amphithe-
= atre. A room ought also to be set apart
to contain the bodies of the dead, previously
to interment; and so private that peculiarly
dixand bodies might be examined without
the knowledge of the Patients. - A building
should be erected at some distance from
the Hospital, for the purpose of Wash-house
& bake-house - those processes being injurious
when carried on in the same house with
the sick. - The privies ought to be literally
privy - so that either sex could resort to them
without being seen by the other - Women
have been known to become much con-
= stipated rather than be seen by a male
on their way to a vault. The Doctor closed
his Lecture by another recommendation of
Air & Water - & with a eulogy on Hospitals,

November, 12th. Lecture second was principally on the Education, and other preparatory acquirements necessary for a student of Medicine;—The Doctor thinks the Latin & Greek languages by no means essentially necessary to the study of Medicine; particularly in our country;—As all the works of repute are translated, and because we have to enter into active life at so early an age, that the most useful parts of science must be preferred to the ornamental.—Reading, writing, arithmetic, & something of the mathematics are among the useful parts of preparatory education:—Eloquence, acquired in debating societies— and the frequent perusal of the poets, are recommended.— A legible hand-writing is particularly enforced; as serious mischief has been done by prescriptions being indistinctly written:—for instance, aqua fortis has been used for agr. font. &c. The study of the French & German tongues are highly serviceable.— A knowledge of Grammar, and a correct diction, are indispensable to the success of a Practitioner; or he will be suspected for a Quack.

Novem. 15th. In the forepart of his third Lecture,
Doctor Rush observed that the ears were more
faithful than the eyes in retaining knowledge;
of course, hearing Lectures is better than reading
books. In order that the whole of the Lectures
may be intelligible, it is necessary ^{to attend} every one;
for one lecture, or even part of one, lost,
may render subsequent allusions and obser-
vations quite unintelligible. A student
should attend chiefly to the diseases of our
own country; and examine the sick himself-
for there is as much difference between
seeing a patient, and reading a description
of his disease, as between the original and
a painting: and more especially should he
prefer the actual observations of those dis-
eases of our Country, which are treated of
by foreign authors as they appeared in
theirs, to the perusal of their works; as
our diseases bear a very different character
from those of foreign countries. To prove
the superiority of observation over closet study,
we have the following circumstance: Hysteria
and

and Worms are sometimes complicated; yet no Author makes mention of such a fact. It is common for Empirics to rail against all Theory, to conceal their ignorance; yet, the Doctor says, there are 10 false facts, and contradictory experiments, to 1 false Theory in Medicine. — We should be punctual in seeing our patient at the same hour every day, and in furnishing the Medicine soon after prescribing it; as it obviates disagreeable uneasiness, and the ill effects of disappointment; which to a sick person are worthy of consideration. Dr. Rush knew a woman who laid awake all night in consequence of her Physician's neglect to see her in the evening. — We should avoid ^{seeing} patients very early or late in the day, for obvious reasons. — We should not be above being an Apothecary, or preparing our own Medicines; Cullen began by learning the Apothecary's business. Be not carried away by attending to uncommon cases of disease; attend those which are most common. Doctor Hamilton was seen to prefer the

the examination of a case of common fever; while the rest of the class were busy in viewing a child which was born with two heads:—His reason for which was, that he never expected to see another child of the same description; whereas, he expected to meet with cases of fever every day. — Be cautious in ascribing cures to such & such remedies; for the patient has often omitted taking them:—Never ascribe a cure to bleeding, without ascertaining that it was done; either by a sight of the blood, or of the arm. Spasmodic convulsions of fever often occur during the night that require attention. Never leave off attending your patients before they are perfectly cured:—Death has been occasioned by neglecting them too soon. Let no companies or engagements hinder your attendance on your patients; if you do not discover an interest in their recovery, they will soon think lightly of you. — Let all your conversation with them inspire confidence; It is

is of great importance in the cure. - An instance is related of a Physician who demanded a fee for the great secret of the art, which he was to teach his pupil; The fee being paid, he took his pupil into a private room, and very gravely unfolded it in the following words: "Conceit can kill - conceit can cure." Private practice chiefly affords cases in high-life. - It is there, too, we have most experience in Epidemics. - But Hospitals have their advantages; - A Physician there is independent, &c. - Hospital patients die more frequently than private patients; as they are often received in the last stages of disease - are intemperate - exposed to impure air, &c. Students should attend the practice of both; - They should study with Physicians who prepare their own Medicines: - They should also attend clinical lectures. - The course before us, says Dr. R., is composed of 4 parts. - viz. Physiology, Pathology, Therapeutics, and Practice of Physic. - The Lecture was concluded by some account of the diseases of the Hospital Patients.

Novem. 16th Lecture 4th. Observe a due Respect, &
the rules of good-breeding, towards every part of
the family in your visits to see a Patient. —
If a Lady conduct you up stairs to see the
Patient, always walk up before her; but let
her enter the sick room first: — And in return =
=ing down stairs, walk behind her; for reasons
which to every delicate mind must be obvious.
Always let the Patient know of your arrival
before you enter the room; this you may
apprise him of by your walk, or by speaking.
The consulting Physician should avoid visiting
the Patient alone; as questions may be asked,
or he may make use of expressions, which
will produce embarrassment afterwards. Let
the Attending Physician speak to the Patient
first; and make the first inquiries. Do not
feel the pulse immediately on entering the
room of a sick person: — Sit down on a chair, or
bunk, or some convenient place, and converse
awhile first, with the Patient, on some ~~unimportant~~ ^{* see next lecture. — should not say much first. unim-}
_{portant} ~~trivial~~ subject; but never introduce foreign sub=
jects, nor speak of them, unless introduced by the

patient. — When the patient becomes perfectly at his ease, introduce the subject of his complaint; but first let him tell all he knows respecting it before you ask any questions; for the sick can generally give the best description of their situation, if not interrupted by interrogatories; though they seldom give a correct account of the causes. — Then, 1st. enquire into the duration of the disease. — 2nd In what manner and place he was attacked. — 3rd The cause of the disease. — Mothers and Nurses are apt to ascribe the diseases of children to an imperfect cure of the small-pox & measles — but erroneously. If any difficulty in discovering the cause occur, or it is not very apparent, inquire into his previous habits of living for several days past; — what change of dress or diet he has experienced. — Spoiled Fish have been known to occasion sickness & vomiting, and effluence ^{see} on the skin: A change of dishes has excited Yellow Fever during its prevalence in this city. — We should inquire if the patient had ever the same disease before, and in what

what part of the World:— Also if his former habits were temperate, this to be known from his Friends or Acquaintance. For the Gout at 40 has often been the effect of Intemperance at 20.— Rheumatism and Phthisis often alternate with each other.— Wounds, strains, and broken bones affect future diseases. The drying up of Ulcers suddenly, may occasion disease.— Judge not too hastily from dark coloured stools.— Steel will occasion black coloured stools as certainly as Malignant fever.— Always inquire if the Patient have taken any, and what Medicines.— Sickness at stomach, itching, suppression of Urine, & also an immoderate flow of it, have been caused by Opium.— Inquire the native place of the Patient.— For the diseases of Foreigners are often influenced by those of their own country.— At the time when the Fever prevailed at Barbadoes, which was accompanied with, or succeeded by, swelled legs, those natives who came to this country, and merely had our common Intermitents, had obstinate swellings of those parts.— People from warm climates bear bleeding legs, when they settle in more northern,

than the natives of those climates;— and those from cold countries will bear greater bleedings when they go southerward, than those among whom they go. — Complaints in the alimentary canal are often brought on, in Young Ladies, by the large use of acids, to prevent their growing too fat. — It is necessary to observe, that people of different nations, frequently call the same disease, or symptoms, by different names:— for instance, what Physicians call Anxiety at the Precordia, is called by the English, "a pain in the Stomach"; by the Scotch, "a pain in the Breast:" by the Irish, "a weight at the Heart:"— A New-England man would call it "Inward Weakness:"— and a person from the southern states, "Mighty poorly:"— Some diseases are hereditary;— as Gout, Mania, consumption, scrofula, &c: and, on that account, require greater care in the treatment. — In chronic diseases, inquire the age of the Patient; and also that of his Ancestors:— Old age is hereditary; and if his progenitors were long-lived, the

prognosis is favorable:— Family diseases may sometimes be cured by the same remedies; when others will fail— As when several of a family have epilepsy; the remedy which cured one, will often cure the rest, while the most powerful of a different nature will have no effect.— A French gentleman cured of Rheumatism by applying leeches to the Hemorrhoidal veins.— By dining with your patient, you may sometimes discover the cause of his disease to be improper dishes. Learn the temper of your patient.— His habits:— If he have been habituated to drink Wine or Spirits, he will require more of those drinks during his illness than would be proper for another of different habits.— In female Complaints never loose sight of the state of the Uterus, as it respects pregnancy, Catamenia, &c.— And in those of Children, never loose sight of teething and Worms— Rest

kept inquire into the actual seat of disease.
Disease always in proportion to the predispo-
-sing cause. - Inquire the state of the
Alimentary canal, &c. - state of sleep - Examine
the countenance: - The manner of his
laying in bed; if the cubitus be natural.
Examine the eyes - attend strictly to the
pupils: - Color of the Hair: - Red-hair'd peo-
-ple more subject to Phthisis - Black-
-hair'd folks of more irritable habits. - At-
-tend to the respiration - state of the skin -
voice - of the tongue: - White tongue
a symptom of simple inflammatory
fever & dysentery. - Brown tongue of
bilious fever: - dry tongue of Typhus -
Black tongue of highly malignant fever -
But be aware that liquorice, black cur-
-rant jelly, & some of the wines will
make the tongue black. - Attend like-
-wise to the color of the nails - Yellow
nails are symptomatic of bile in the
blood - Healthy people's nails are red. -

Novem. 17th Lecture 5th. I am uncertain to rely
on the appearance of the Patient. - I
trust my Pupils will be distinguished
for their chief reliance on the pulse!
Medium of healthy pulse 66 - at birth,
140 - 3rd year, 80 to 100; this number of
strokes in the minute continues till
the 7th year. - At 12, the same as in
adults. - In old ^{people} slow and intermitting -
A perfectly regular pulse in an old man,
is a sign of disease - The pulse is influ-
enced by the sex - quicker in females,
as well as more frequent - seldom & slow
among savages - quicker in large cities -
In short people - climate & season in-
fluence the pulse - heat accelerates it -
slow in cold climates - seldom above
40 strokes in a minute, in a Greenlander.
It is slowest in the morning - quickest at noon -
and generally slower in the evening - slower
in sleep than waking - on our back than
on our side - quicker still when sitting up -
The position of the arm affects the pulse -
When

When the arm is uncovered, the pulse gives
no correct idea of the state of arterial action.
Never feel the pulse in the arm that is
laid on. — Eating, drinking, and the stimulating
passions quicken the pulse — conversation quick-
ens it. ^{* see last lecture} — Exercise always does. — A gentleman
who had a preternaturally quick pulse,
had an attack of fever, after which it
became natural. — Morbid state of the
pulse — 1st. in frequency & quickness — Pulse
may be quick without frequency — fre-
quency caused by irritability of the
blood vessels — slow pulse caused by apo-
plexy — by the excessive stimulus of some
poisons. — depressed pulse, as seldom as
30 or 40 strokes the minute, in pleurisy —
It differs from the low or weak pulse
in appearing in the early part of acute
diseases; or in a paroxysm of such dis-
eases as are periodical. — It occurs in in-
flammations of the stomach & bowels. —
Full, frequent, & quick pulse — called the
synochus pulse — 3rd ^{full, quick, frequent & tense} Synocha pulse.

4th small, tense pulse, like catgut, called
sulky, or locked pulse - 5th. hobbling
pulse; tense, full, and unequal -
6th quick, frequent, small, contracted
pulse; called synochus: occurs in chro:
nic inflammation - 7th. typhus pulse;
in the last stage of fever - 8th. typhoid:
occurs in the slow state of fever -
9th. Synochoid pulse - 10th. Hectic
pulse, quick, frequent, & often full -
11th. The natural pulse occurs sometimes
in the most dangerous state of Malig:
nant fever. Lastly, thread-like pulse,
occurs chiefly in the act of dying. Dr. Ramsay
observed that the last pulsation of the heart was
much fuller than the preceding ones -
Dicrotic pulse, is known by 2 quick strokes,
and 2 slow ones, I believe! Intermitting pulse. In
palsy, the pulse is quicker on the sound,
than on the diseased side. Weak, low pulse,
without fever, occurs in Hypochondriasis; &
after profuse Hemorrhages. Aneurysmatic
pulse, occurs in Stomach and Bowel com:
^{also a symptom of aneurysm} plaints. Directions for feeling the pulse. -
never

Never feel the pulse immediately on entering the room; but it should be felt before the Patient describes the disease, as speaking accelerates the pulse. — See last Lecture; where I have misstated it. — Feel the pulse with your four fingers ~~that~~ has more sensibility than the thumb, ~~and other fingers~~; however, you may apply two or three fingers, sometimes, with advantage. — Feel the pulse in the Patient's ^{arm} right hand, with your Left hand: — and vice versa. — Feel it in both arms when depletion is a doubtful remedy. — Let the arm be perfectly free from pressure. Keep your finger on the pulse for 20 strokes, The Chinese feel it for 49 strokes, — hence their accuracy: — Where difficulty occurs in deciding, keep silence — shut your eyes, &c. — Feel the pulse to know when to give Opium, vomits, purges, chalybeates; — to use the Bath, &c. — Indications from the force, not frequency of the pulse. The pulse has been regular, and even hard, in inflammatory diseases — just before death. If I were to build a Temple to Medicine, there should be inscribed over the door "Let no Man enter who is not acquainted with the pulse!"

Novem. 10th. Lecture 6th. The natural state of the pulse during the first year, in children, is 100 strokes in a minute. — The pulse is generally full and tense in proportion to its unfrequency. — Running increases the pulse to 150; but, if followed up, will prostrate it; or suffocate it, by compression. — The depressed pulse which occurs in pleuritis, is most frequent in those of Autumn. The Typhoid pulse is a medium between synchoid & Typhus. — The Ectic pulse occurs in Phthisis, Ectic gout, and fevers from illconditioned ulcers. — Even in debility, without disease, people require medical aid. — The Aneurysmatic pulse gives a very jarring sensation. — There has been an absence of pulse for hours, and even days, without causing death. — Never apply blisters in the way of feeling the pulse; — if they should be so applied, you may obtain a correct Idea of the state of vascular action from the Temporal Artery. &c. &c. &c. &c. &c. —

Novem. 19th Lecture 7th Physiology is the doctrine of the Animal functions in a healthy state. - Animal life consists in Motion, sensation, & thought. - Life may exist without thought or sensation; - The lowest state of Life is in Asphyxia. - Every part of the body, except the hair and nails, is endowed with excitability, or irritability. - It is of no consequence to us whether excitability be a quality or a substance; Tho' Guttman supposes the latter; & that it is oxygen. - It appears to be a unit. - Life is the effect of stimuli applied to the excitability. - In the words of Dr. Brown it is a "forced state"; but the idea is originally Dr. Cullen's, though he afterwards renounced it. - The human body is not an Automaton; - its actions are all caused by external agents. - All the phenomena of the human body; or rather, animal economy, are the effects of stimuli upon the excitability. - Impressions upon the body excite the mind and produce thought. Stimuli are divided

into external and internal. 1st. external stimulus,
Light. - 2nd. Sound. - 3rd. Odors. - 4th. Air. - 5th. Heat;
an uniform and active stimulus. - 6th. Exercise. -
7th. The Pleasures of the Senses. - The internal
stimuli are Food; and its various modifications
after mastication; as the chyle - the blood - secreted
fluids, &c. - The mind is always passive in
sound sleep, in health. - Dreams are to supply
the place of some deficient stimulus. - Life is
most perfect at mid-day. - It is not best to work
hard in the morning. - Second part, on Animal
Life. - Disease depends, in part, upon a dis-
proportion between the Excitability and the Ex-
citement. - (or stimuli?) The absence of one stimulus
is supplied by the increased action of the
others. A diminution of Animal Life takes place
during sleep. - Artificial sleep from opium, &
other diffusible stimuli, is the consequence of the
indirect debility which they induce. More
air phlogisticated in sleep than waking. - Ley-
denham excited sweating in plague, profusely,
by covering the patient with bed clothes &
causing him to breathe the same air for a
while. - Aliment in the stomach acts most
power=

powerfully during sleep - as well as urine - The
fæces act during sleep so as to occasion dreams;
particularly in the morning, when sleep is light.
Depressing passions cause night-mare. Do
not complain, Gentleman, when you are be-
-strode by this midnight hag; she kindly comes
to prevent sudden death, ^{causing full inspiration, &c.} [by waking you.]

The Excitability of Children is so great, that
far less degrees of the stimulus of heat will keep
them as warm as Adults. Irritability in Children
Predominates over sensibility - so that they
bear surgical operations wonderfully. - Crying
and laughter both contribute to the health
of Children; - It is as possible for them to
cry and be fat - as to laugh and be fat. -
At the middle stage of life, Man is in his
most perfect physical state. Old age most subject
to Cancers, &c. because of the acrimony of the fluids
in that stage of Life; - The wounds and sores of old
people are most difficult to heal, from the same
cause. - An Aged Lady once asked a Physician
what was good for an old woman. - He answered
by saying - What is an old Woman good for? But
they do not survive their usefulness as often
as men. - This we see every day. -

Novem. 20th. Lecture 8th.—Life is supported by stimuli.—Irritability prevails over sensibility in old age.—Life is supported in Idiots by the stimulus of the venereal appetite; and the numerous motions and gesticulations, &c. which they perform. Life is sustained in Asphyxia, by the excitability accumulating during the suspension of the vital functions; and thence becoming much more easily excitable.—

Dr. Rush thinks, with Dr. Hunter, that if animation could be instantly suspended by means of cold, and the body kept in a proper temperature, it might be preserved, and excited into life again at any future period.—Dr. R. knew a gentleman, who once died, to all appearance; but was sensible, and understood the discourse of those around him who were fixing the time for his interment.—The horror of being buried alive had the effect of producing excitement, or Life.—
all animals require more or less air.—
Food

Food more or less stimulant:— They all possess
more or less loco-motive power.— Life & growth
is supported in both Animals & vegetables
by stimuli.— Seeds would never germinate
while kept from the combined stimuli
of heat & moisture.— Subduction of Stimuli
will destroy Life:— Excess of stimuli will destroy
it;— in this way Malignant fever acts.— Dr.
Rush then went on to compare the differ-
ent states of Life to those of a violin.— Death
from old age is a gradual palsy— It begins
at the eyes— Then the ears become paralyzed—
then the limbs— back, &c. The mind would
never act if it were not excited by stimuli
upon the senses.— No innate ideas—
but an innate capacity for the excitation
of ideas by the application of stimuli to
the senses.— No little God in the brain to
guide & conduct our actions, &c.— The mind
is first excited by stimuli on the senses, which
give rise to simple ideas— These ideas are combi-
ned into thought, or reflection.— The mind then
becomes capable of volition, or willing the action of the body

Novem. 22nd. Lecture 9th. Animal Heat.
is always the same in all tempera-
tures; viz. 96. Dr. Stevenson says it is ow-
ing to fermentation in the blood. This
is not the fact. Dr. Leybert has clearly dis-
proved it in his Inaugural dissertation. Dr.
Rush says there is no putrefaction in
the blood; but there may be in the ex-
cretions. Another hypothesis is, that it is
owing to the friction of the blood against
the sides of the vessels;—This is also untrue.
Another supposition refers it to the collision
of the particles of the blood against
each other: likewise false. — Chemistry
has discovered the true cause of Animal
heat. Dr. Black led us to this knowledge.
The same process goes on in our bodies
during Respiration, as in a smith's fire
during the blowing of the bellows. viz.
a decomposition of oxygen^{gas}. — The basis
of this gas is combined with the blood,
giving it its scarlet hue; while the caloric
is

is set loose. — The fire-place of our bodies, is
the lungs — They phlogisticate a gallon of
air in a minute. — There have been some
objections to this theory; but Dr. Rush does
not think them of much weight. The va:
rious ^{acids} of the body, as the lithic, sebaceous,
&c. he thinks are formed by the oxygen
obtained from the air, &c. — Dr. R. thinks
the reason why animals become no warmer
in high temperatures is, that the heat
become latent by some means. — People
have been burnt, or their flesh decom:
posed, in bed without the least effect
upon the clothes, or even the stockings on
their legs. — These accidents have chiefly
happened to Drunkards, & females. — All
animals die when deprived of air. — The
frog in the rock. — Polypi form the
connecting link between animals and
vegetables. — Heat nearly the same in
all parts of the body. — Inequality of
heat is as much a disease as an
inequality of sentiment. Heat one de

degree less in sleep than waking. The Use
of heat, is to preserve fluidity of the fluids;
promote digestion, aid the senses, &c. - Next in
order comes respiration; - Motions are divided
into voluntary, involuntary, and mixt. The
only mixt motion is respiration. - The origin
of involuntary motion is the most abstruse
question which ever engaged the atten-
tion of Physiologists. - Dr. Berkeley supposes
the first motion of the heart, at birth, to
be voluntary. - Dr. Rush, is forced to reject
this hypothesis. The hearts of children who
have had no brain, have yet pulsated; -
Now, without brain there can be no mind,
- and without mind - no volition. - Dr. R.
knows of no other cause of the involun-
tary motion of the heart & arteries, than
that those parts possess a greater share
of excitability than the voluntary muscles,
therefore more easily acted on ^{by} their con-
tents - and become thereby habituated
to action, independent of the will. -
Respiration to be treated of tomorrow. -

Novem. 23rd. Lecture 10th Respiration, is
divided into two parts-viz. Inspiration, and
Expiration.—Dr. Cullen gives the best account
of respiration in his Physiology—The Lungs
have but little Sensibility & Stimulability.
have most in the bronchiae. This want of
Sensibility, &c. is of great advantage to them.
Causes of Respiration—An uneasy sensation
at the breast—The stimulus of dephlegmated
air—&c. Its Uses are numerous—conveys pure
air to the blood—opens a source of heat
necessary to Life—carries off vapor which might
be injurious—Respiration is performed with
most force, though not most frequency during
sleep—Assists greatly in parturition, by cau-
sing the diaphragm to compress the uterus.—
It enables children to perform the delight-
ful operation of sucking—When a child
is in pecticoats, a Physician should not
ask the sex—His own observation should
teach him to discover:—for the breasts of
females move most in Respiration; where-
as in males the abdominal muscles
are most used. If cough suddenly ceases

in Consumption; and diarrhoea does not
come on; death soon ensues. Catarrh is
always preceded by debility, of the indirect
kind. Truizing is a proof of the crisis of
catarrh. Laughter, when moderate, conduces
to health. Tristram Shandy's Dedication.

Hiccup occurs after excessive laughter;
and in the last stage of some fevers. —
Physiology is to Anatomy, what Phi:
sosophy is to natural history. — The
Organs of voice & speech act upon si:
milar principles as a Wind Instrument.

Dr. Rush illustrated this by a copious com:
parison. — Inflammation in the frontal
sinuses renders the voice dull. — The dif:
ferent motions of the Glottis are said to
be 9632. — The voice is divided into grave
and acute, according to the dilatation, or
contraction of the glottis. — and weak or
or strong, according to the force with
which Respiration is performed. — The
voice is modulated by the passions. — Those

Those who are commonly said to speak through the nose, do not, in fact, speak enough through it. The cavity of the nose is diminished. — Paraphonia is a low, whispering voice: Aphonia a total absence of it. — Speech is wholly imitative. — Dr. R. knew 2 children in this city who did not acquire speech until the 8th. year: The knowledge of this fact will enable us to encourage the parents of children who are backward. — The Larynx & Glottis are first used towards speech, in infants: as in ^{the tongue next, as in} crowing; and crying Dad - dad. &c. — The lips are then used as in saying ma - pa - mama - papa, &c. — Physicians should go into their nurseries not only as parents, but as philosophers: They should observe, nicely, the evolutions of the mind in children. The Ear & Eye, but chiefly the former, are the avenues by which children acquire speech. — They should be made to repeat hard

words a dozen, or more times, or they will forget them. — Language is divided into guttural, lingual, & labial. — Savages and lazy people speak gutturally. That plethora of vowels in the Italian language appears to have been introduced by indolence & pure laziness. Philadelphiasm, or the pronouncing of veal - weal; white - vite; &c. — may be cured by keeping the tongue against the teeth while speaking those words; & pressing the upper teeth & lower lip together. — Ventriloquism is a deception: — Those cheats speak during inpiration. — Dr. Johnson says there are 40,000 words in the English language; and many have been added since his time. Man possesses many faculties in a much greater degree than brutes; but it is chiefly by the power of rational speaking that he is ennobled above the other animals of creation.

Novem. 24th. Lecture 11th. — Circulation of
the blood. — The action of the Auricles of
the Heart is synchronous; as likewise
is that of the Ventricles. — The Heart excites
the brain, & is, in turn, excited by it. The
Arteries are strong in proportion as they
recede from the Heart; hence Aneurisms
form most frequently in the large Ar-
teries. — Veins the same. — The Heart
is the first mover of the blood — it is ex-
cited by the stimulus ^{of distention.} — Vis irrita. — By an
influs from the Brain it derives a
large portion of Irritability. — The doctrine
of oxygenated blood does not explain
the action of the right Ventricle & Auricle.
The quantity of blood in a middle sized
Man is computed at 25 lbs. — This does a-
way the objections to copious venesection. —
The Arteries are the Primum Vivens, &
Ultimum Moriens of an Animal. Uses
of circulation — to support the brain — con-
vey heat — fluids — & give tension to the nervous system.

Novem. 25th. Lecture 12th. — There will some-
thing remain unknown concerning the
human body — to stimulate inquiry. Physi-
cians will, doubtless, one day, arrive at
the knowledge of the functions of the
brain; — I agree with my old master, Doctor
Cullen, who used to conclude his Lec-
ture on an abstruse subject, with dies docet.
Valli says the nerves terminate in the
brain. — Dr. R. includes in the term nervous
system — the brain & nerves, muscles, tendons,
and mind. — Ganglia are little brains. They
intercept the power of the will over in-
voluntary muscles. — I shall neither adopt,
nor reject the prevailing doctrines con-
cerning the Vital Principle; — which Gir-
tanner supposes to be Oxygen; some others
Electricity, &c. — I suppose sensation and
motion communicated by a Matter-sen-
geries; — from the brain. The nerves & Mus-
cles possess a Vis invita. — I will here advance
merely as conjecture, an idea that the
nervous

nervous fluid is separated in all parts of the body, but especially in the brain, by friction of the blood against the vessels. The vessels of the brain are remarkably flexuous. The vis insita is generally in the inverse ratio of sensibility. In producing the motion of animal bodies, the following is the order—first Impression, then sensation ensues; the consequence of which is perception in the mind, exertion of volition, and finally motion.—^{Mr} Sensation is simple & reflex—the former is confined to the nerves; the latter extends to the brain; as when perception or volition is excited.—Impressions do not always produce sensation & motion; never lose sight of this fact.—A continued impression on the mind excites attention.—But one sensation can be excited in the mind at once. This fact is of consequence to remember.—Sound whipping will counteract the bad effects of an over-dose of Opium. Impressions may be so strong as to destroy ^{sensation}

sensation:—As in some cases of Malignant fever, the patient will feel no pain.—Habit has a great effect on sensibility. In some instances a continuation of impressions will excite more exquisite sensation:—As in that infamous punishment formerly used by the Inquisition, of dropping water from a high ceiling on the bare scalp.—Habit also renders the inhabitants of marshy countries insensible to Miasmata—& even renders the stimulus of them necessary to health. An unconscious prosecution of an act, after it is commenced, is performed by association.

Novem. 26th. Lecture 13th.—Effects of Habit upon actions, or Irritability.—Motions in Infants acquired by Habit; as they are very irregular at first.—Active Sympathy increases in proportion to the diminution of passive sympathy.—A young Physician will feel more, and do less for his patient; whereas an old Physician will feel less, and do more for him.

Walking is at first a voluntary motion; but it will be performed afterwards, independent of the Will. - Repetition increases strength; as it is said a man that lifts a calf every day, will be able to lift it when a cow! - Repetition regulates nearly all our actions. - A knowledge of the Laws of Sympathy; or Association, as Darwin calls it; is a desideratum in Medical Science. The effects, or phenomena of Sympathy, demonstrate the Unity of the nervous system. Sympathy is divided into Contiguous; as the effects of shrill noises, such as whetting a saw, upon the system. - Delusive, as the irritation at the glans penis from stone in the bladder. - Continuous, as the intimation of the rectum to stool, after eating; &c. A case of delusive & continuous sympathy united, is when the nose is irritated by worms in the stomach; The case of stone in the bladder is also one of this kind. Mutual Affections of Uterus & Rectum afford a case of Contiguous sympathy. - Evolution of strength; - first in the Back;

next in the neck; then the arms, legs, muscles of locomotion, &c. Children can always run before they can walk:—A drunken man can run better than walk.—Sick people acquire strength in the same order.—
The Senses.—Whole surface of the body capable of sensation.—The Brain is like a great City:—The five senses are the avenues, or roads leading to it. Touch is a widely-extended sense.—Wounds where the skin is thick, as the soles of the feet, or the palms of the hands, often produce tetanus, than ⁱⁿ more tender parts.—
The colours of nations, & people, lie in the rete mucosum. Hair-powder dries the hair.—Sensation much governed by the state of the arteries:—Always in proportion to the tension of the arteries of the part; and of their number:—as in the lips, breasts of females, & genitals of both sexes.—The fingers possess most capacity for ^{covering}

covering the properties of bodies; lips the
next; but the brain must be wholly
free from compression; or even much
impression to discern nicely. - The sense
of touch is most acute when all the
other senses are free from impression.
Hence the propriety of silence & darkness
in feeling the pulse. - If we were devoid
of the sense of touch, we should not
be able to distinguish the rosy cheek of
a pretty Girl, from a coal of fire!!!
Horses start at stumps, stones, &c. from
the want of this sense. - Helvetius
conceives this sense to be the best &
most general mark of distinction be-
tween the human species & other animals.

Novem. 27th. Lecture 14th. Taste is seated
in the tongue. - The sense of Taste is situ-
ated exclusively in the tip and sides of
the tongue. - The third branch of the 5th.
pair of nerves are the particular organs
of taste. on a dry tongue, no taste can be

be excited... Dr. Reid supposes that the sense of taste is effected by the solution of the body applied, (dissolved in the liquor of the tongue) acting upon the nervous papilla of the tongue: Dr. Rush thinks this theory approaches truth. Taste may be transferred to another part of the mouth, when the tongue is destroyed; as the sensation of the Glans penis may be transferred to the pubes, when that part is amputated. — Taste is not an independent sense — it is intimately connected with smelling — The eyes aid Taste — Taste directs us to the use of wholesome Aliment. — The objects of Taste limited to seven — like the primitive colours. The varieties of this sense are occasioned by a mixture of the primitive objects. — Smelling. — The only difference between Animals of acute smell, & the contrary kind, lies in the size of the Ossa Spongiosa. — Inspiration essential to the sense of smell. — It is rendered more acute by shutting the mouth.

Three of the senses, seeing, hearing, and feeling, are Mechanical;— The other two, Taste & Smell, are chemical.— Smell:—
-ling assists taste.— Odors are extremely diff:—
-fusible;— then why not Infection?—
Elephants & Greyhounds possess the
Sense of Smelling in greatest perfection.
The Man who could follow his Wife's tracks
by the scent of her feet!!! The Bramins
possess this sense exquisitely.— They can:
-not endure the odor of the perspiration
of an European, who has been long con:
-fined to Animal food.— They live
-exclusively on vegetables.— Odors seven
original, like colors— & combined to pro:
-duce the varieties.— Smell transperra:
-ble to the Stomach, when lost in the
Nose— like taste to the other parts of y. Mouth

Novem. 29th. Lecture 15th.— Smell, continued.—
Some odors which are disagreeable when con:
-centrated, become grateful when diffused; as
Musk, &c.— Some bodies of powerful odor, have
but little taste.— The gratefulness of odors, as the
Rose, is increased by previously smelling some

disagreeable substance, as Apapetida, &c. Odors lose their effect on the olfactory nerves by repetition; but probably assist in sustaining Animal Life, notwithstanding.

Seeing - differs from taste & smell, by being committed to two organs; as well as by being produced Mechanically. All Animals have, at least, two eyes; some have four, others six, & some others have eight. They are protected by the orbits, eyelids, eyebrows, &c. The eyelids have, or are composed of, six coats, which are devoid of fat. - The Eyes moves in all directions with inconceivable velocity. - The Conjunctiva is a continuation of the Cuticle. The Sclerotica, or white of the eye, is a continuation of the Psia Mater. - The Cornea is transparent in every eye. - No nerves have been yet discovered in it. - The Choroidea adheres to the Sclerotica by the ciliary circle. - The Uvea is covered by a black pigment, which absorbs the straggling, or superfluous rays of Light. - Pupil - The Retina is a continuation

of the optic nerve. — The Vitreous humor
is situated in the posterior part of the eye.
The Crystalline Lens is contained in a
strong, elastic capsule, anterior to it. — The
Aqueous humor, anterior to all. — —
Light, — consists of Seven different species
of rays — or primitive colors; which may
be recollected at any time, by remem-
bering the initials of those words; thus
V. I. B. G. Y. O. R. — standing for Violet, Indigo,
Blue, Green, Yellow, Orange, and Red. — A body
is White when it reflects all the rays.
Black absorbs them all. — Transparent
bodies reflect none — they all pass through.
Refraction, is when the rays are broken
by passing from one medium to another
of different density. — The Rays fall in
^{various} ~~many~~ directions on the cornea — are re-
fracted by the humors; — & the Retina
is the point where the rays meet, &
form vision. — The exact shape of the
humors is necessary to complete vision.
In children, & some adults, the eyes

eyes are so convex that the rays of light meet too soon; which renders them short-sighted:—and in old people they become too flat to see objects which are very nigh.—A complete eye can enable a person to read a clear, middlesized print, about one foot distant.—The eyes accommodate themselves to the distance of objects.—The pupil expands in the dark, & vice versa.—The quantity of light necessary to vision is relative; as a person may be able to read, after a while, where he could not at first:—tinguish the largest objects at first. Blue, or Grey eyes are the natives of northern climates:—Black eyes, of southern:—Thus their color is adapted to the quantity of light they are destined to receive. The figures of objects are inverted in the eye; but the mind receives a just idea of their position by attending to the first

first impression.—See Potterfield on the eye.

Two impressions of equal force cause but one sensation.—The right eye is this without exception?—in left handed people, the right eye is that in fact, slight &c.—is chiefly used in vision.—Why

Light & Darkness affect the eyes?—

Light is a stimulus which causes the pupil to contract—when it is abstracted, the pupil dilates.—Looking at

a piece of black cloth an hour or two before you go to see the favorite of your heart will render the eyes finely languishing; & perhaps enable them to do execution!—Green is

the middle color—& most universal.—

Avoid reading while on your back.

also avoid reading perpendicularly downw.

Receive the light from behind, or sideways.

Never read with excessive, or scanty light.—Nor al-

ways the same sized print. Avoid pressing the

eyes in washing the face.—Use Spectacles

as soon as vision begins to fail.—Seeing is

the most noble sense.—The Eye is the Mirror

of the Soul, & the Masterpiece of Nature!!

Novem. 30th. Lecture 16th. — Hearing — Sound consists of certain vibrations in the air which excite sensation in the mind. — Sound is applied to those vibrations occasioned by speech, &c. — Noise to those occasioned by the concussion of bodies; or the explosion of Gunpowder, &c. — The Earth, Air, & Water are the media of sounds. — Bodies are sonorous in proportion as they are tense. — Grave sounds descending become acute; — & acute sounds upon elevation become grave. — The more vibrations in a given space, the more acute the sound; & vice versa. — A sound, to be audible, must consist of at least 30 vibrations in a second. — A distinction is made between Acuteness & Intensity of tone. Dr. Franklin's Harmonica was constructed with glass tumblers; which emit sounds by rubbing the edges. — Length and a small degree of tension of sonorous cords, emit grave sounds best; — while short, tense cords emit acute sounds. The presence of air is necessary to the production of sound; — a bell will not produce sound

sound when struck in a vacuum. - The angle of the reflection of sound is equal to its angle of incidence. - The Ear is divided into three parts; - Meatus Auditorius Externus, Tympanum, & Labyrinth. - The projection of the ear aids sound. - The Membrana Tympani is nearly horizontal with the earth; because sounds chiefly come from below. - Hearing continues, sometimes, after the rupture of the Memb.^a Tympani. The portio mollis of the seventh pair of nerves goes to the cochlea of the ear; which /cochlea/ is to that organ what the retina is to the eye. Sound is the raw material of which speech is manufactured in the Cochlea. - Hearing is rendered dull in children by a quantity of mucus - which is wisely provided to defend their tender organs. - We learn the direction & nature of sounds by Experience only. Hearing is dependent on, or is aided by, the nose, the eyes, & the mouth. - It is more acute when respiration is suspended. - Hearing is transmissible to every part of the body; - Kaese Boerhave could distinguish sounds by his feet, after he had lost the sense of hearing.

A young Lady in Germany discovered the
tune her sister was playing on the Harp-
sichord, by resting her teeth on it, after
she had become totally deaf. — A certain
Lady could discern the noise a pin made
in running through paper, when she
could not hear the firing of Artillery. —
The ear is the sole judge & regulator
of sound; — hence deaf people are apt to
speak lower / or higher / than usual. —
The mind receives but one sensation
from 2 impressions on the ear. — Har-
mony & Melody. — The latter consists of a-
greeable successions of Notes referable to
the gamut; — Harmony consists of agreeable
combinations of them. Savvin. — The song
of birds is intirely Melodious. — The taste
for Melody is universal; as every one
admires the singing of birds. — Hearing is next
to Vision in importance. — The senses are
the avenues of thought. — Without them we
should be below the brute creation — like logs
and stones. — Ideas are the offspring of
previous sensation. —

December 1st. Lecture 17th. — Philosophers
have had various notions concerning
the operations & nature of the mind.
The Senses are often deceived by not sub-
jecting bodies to all, or several of the
senses: — The senses are liable to fallacy
from disease. — Always bear in mind
the dependence of the senses on each
other. — Ghosts & Spirits have existed
merely because certain phenomena
were not subjected to the inspection
of more than one, or at most, two senses.
No person ever felt a ghost; yet if they
were visible, they must be tangible.
The noise of window-shutters in a windy
night, has often passed for ghosts: — The
reason was, they were not subjected
to the other senses. — Never believe
in apparitions, Gentlemen, until you
feel them! — Some have laid great
stress on the efficacy of Observation
in acquiring knowledge; — others have
depended solely on reason in order to
arrive

arrive at correct information;—While
a third set cry down every thing
but Experiment.— But, Observation,
Reason, and Experiment combined
are necessary to form a correct
judgment.— The Mind acts, and is
acted on, as mechanically as the
Senses.— Without a knowledge of the
operations of the mind, let no man
enter the cell of a Maniac; or the
room of a person in a delirium
as physician; or if it can be avoided,
as a nurse.— One class of Philosophers
has supposed the Mind to be im-
material; and that it acts totally
independent of the body.— a 2^d.
that it is an exquisitely fine and
subtleized something ^{Matter}— but intimately
connected with the organization of
the body.— While a 3^d. assert that
there is no such independent of
the body; but that it is the effect
of external agents upon the brain,
through

through the medium of the senses. Atheists,
Deists, Theists &c. — Dr. Priestley is at the
head of a sect who suppose the soul
undergoes a temporary death; but
will be raised again at the last day
with an incorruptible body. — These
doctrines, let which will be right,
do not affect the laws of Stimuli
& Excitability. — There is no necessary
connection between the mind & body.
The Deity can effect his purposes with-
out our being able to comprehend
the laws by which they are effected.
The Bible is not a Metaphysical
work; it is code of rules & regulations
for mortals to act by. — All this does
not affect the Christian Religion. — The
body first acts upon the mind; &
the mind reacts upon the body. —
By the Mind I mean all its fa-
culties. — The faculties of the mind, are,
Memory, Understanding, Imagination,
Will, Passions, Moral Faculty, Sense

Sense of Deity, & Conscience. Dr. Rush
supposes a Motion takes place in
the Brain at every Action of that
Vireus, similar to that of the Mouth
and Lips in speaking; or rather
upon the same principle. — A
definite, fixed operation of the
brain for every Idea, or Thought. —
A small Motion takes place in
the nerves upon the slightest
sensation. — If I were permit-
ted to coin words, I would have
a vis irrita, a vis nervea, a vis
sensoria, and a vis mentalis; ex-
pressive of the powers of different
parts. — These Motions, or powers
are excited by the various external
and internal stimuli. — Animals
whose hearts are nearest the brain, have
most mind. — The brains of Infants
too soft & tender to convey Motion;
Those of old people too hard. — Size,
and density of brain govern its Powers. —

Decem. 2nd. Lecture 10th. — Fallacy of relying on a
part of the senses — or on the senses apart from
reason — or of relying on reason, without consulting
the senses. — Memory — is one of the noblest
faculties of the mind. — The power of recalling
objects to the mind. — Reminiscence — is a
recollection of objects past, by a fresh applica-
-tion — it exists in some brutes, & in ~~con~~
under one year of age. — Improvement, ^{& extent} of
Memory depends on civilization — Savages
possess it in a low degree. — some nations
cannot count more than 3. — There are
5 ⁴ species of Memory — viz. 1 for words, 1
for names, 1 for Numbers, ^{1 for Things, or places,} & 1 for Ideas —
each possessing a separate portion of
brain. — Thos Fuller [a negro] had a remar-
-ably strong memory for Numbers. — Me-
-mory of Ideas the noblest of the whole.
It distinguishes Philosophers and Men
of Knowledge, from those of mere Learning.
Imagination — differs from Memory
in embracing future as well as past

events. - Memory may be compared to History;
Imagination to ^{Painting} a picture, or camera obscura.
Memory like a ship with oars. - Imagina-
tion like one under sail. - Imagination
is the Columbus of the mind. - An essential
ingredient in Genius. - It differs from Fancy.
All the faculties form what is called
the Human Understanding. - The other
faculties are the materials, which
the Understanding, like a skilful work-
man, builds up into a stately fabric. -
The Will is the faculty by which we
reject or choose objects. - has 2 seats. Volum-
tas facit peccatum. - Passions are to
the mind what the senses are to the
body. - Propensities. - desire. - emotions. - &
affections. - The Moral Faculty is in the
Will. - Conscience in the Understanding. -
Sense of Deity distinguishes man from
brutes. - Moral Faculty is the governor of
our actions. - Conscience the judge of
them. - Speculative Truth & Error are
the objects of the Rational Faculty. -
Good and Evil are the objects of the

Moral Faculties - Queries - May there not
be quiescent faculties - & may not those
faculties be excited at some future
day, to perfect our Happiness? The Mind
has been compared to a well organ-
ized government - Memory & Im-
agination are the House of Representa-
tives - Understanding is the Senate -
^{The Will is the supreme executive}
Moral Faculty the Judiciary - Consci-
-ence the high court of Errors & Appeals.

Decem. 3rd. Lecture 19th. - Operations of the
Faculties of the Mind - Perception, Asso-
ciation, Judgment, and Reason - Solution is
likewise a faculty, but modified - All
sensations when conveyed to the brain,
excite Perception - A change is produced
in the mind by Perception, called Idea -
Ideas are the Images of real objects - Dr.
Berkely supposed there was nothing in
nature but spirit; that what appear-
ed Matter to us, was merely ideal -
Buffon denied that there was any thing
spiritual; but that all was Matter;
even

even Mind he thought was wholly ma-
terial. - Hume asserted there was nei-
ther spirit nor Matter in existence;
that all was Shanton!! The Human
Mind may be considered as composed
of 2 parts - Ideas - & Notions, or Thoughts.
Idea is a quality - as much as sound.
The revival of Ideas is performed by
association. - Thoughts appear to be
the effect of motion in the brain -
excited by external and internal sti-
muli. - Thought, therefore, is a quality.
Ideas are simple perceptions. - Thoughts
are the combinations of those ma-
terials. - Association is an operation
of all the faculties of the mind. -
It is the same thing in the brain,
as Sympathy ^{nerves & irregular system} is in the body. With-
out this operation, we should be un-
able to judge of any subject. - When
we think of a great General Van Horne,
we associate with those ideas, the

the name of Buonaparte.— Most of our pleasures and pains are owing to this power of association.— Genius consists, in part, in dissolving wrong associations, and effecting true ones.— Association is assisted by pleasure & pain. We feel pleasure & pain many a time, by association, without being sensible of the cause— as is often, & indeed, generally, the case with Hypochondriacs.— Sounds, Letters, Words, &c. produce association.— The word Blood always produced fainting in a gentleman of Liverpool.— Alex. Alexander, by this power, was long known by the name of No-point.— Association of ties of consanguinity, &c. often of great consequence for Physicians to be acquainted with.— Judgment is formed by a comparison of Ideas; thereby enabling a just inference.— Reason consists in selecting singular

Propositions formed by judgment, and de-
ducing Truth.— It would be more proper to
call reason—Induction.— A person may
possess judgment without reasoning
powers.— Genius travels on the wings
of the wind.— Reason travels on foot.—
Genius & Common Sense different.— Com-
mon Sense consists of opinions and
feelings in unison with the Ma-
jority.— Reason belongs exclusively to
Mankind.— Taste is a faculty of
the mind.— Passions affect the mind
both morally & immorally;— That is,
whichever way the mind inclines,
they cause it to act with more vi-
gor.— Reflection, contemplation, &
Attention.— The Miser is attentive to
his money.— A man of moderate talents
may reflect.— But the man of genuine
abilities, alone, can contemplate.
Spirit is composed of, or consists in, a
set of ideas which are peculiarly ap-

apposite - or the contrary. - Laughter is chiefly excited by incongruity. - Operations of the Will. - But one action can be performed with consciousness at once. - A woman can walk, talk, & knit at the same time; yet but one of those actions is performed with consciousness at once - the others are performed by Association. - All the Acts of the Will are the effects of Motives applied to the mind. - There would be no more will without motive, than Life without Stimuli. - Free agency and Necessity alike true - The new-born Infant, a germ of sleeping mind. - A sense of Deity appears in Children at about the 5th. year. - Imagination seldom acts in Children before 12 or 13 years. - The Memory is the faculty which fails first. - Imagination & Understanding next. - The Moral sense, & sense of Deity generally increases with age. The Faculties oftener decay, or wear from use, than they are worn out. -

Decem. 4th. Lecture 20th. — Second Thoughts
are best in the Rational faculties — first Thoughts
are best in the Moral faculties. — Intuition
is but a rapid operation of the rational
faculties. — Ideas are the effects of certain
motions excited in the brain — therefore
a quality. — And cannot be recalled but by
the same motion again excited, either by
the object, or by Memory. — Association
appears to be Involuntary. — A Thread
on the finger, often brings back the idea
associated with tying it. — Reason takes
certain propositions, — combines, sepa:
rates, compares them, and deduces truth
from them. — Taste supposed to be a
faculty by some — by others an Opera:
tion of the faculties. — If it be a faculty
it is something similar to the Moral
Faculty. — Reflection is confined to single
objects. — Contemplation extends to a
variety. — Pleasures of the Senses, &
Mind. — Pain appears to be the na:
tural state of man, since his fall. — plea:

Pleasure being artificial, or the effect of Stimuli upon the excitability. - Absence of Pleasure is pain; as the absence of Stimuli is death. - Pleasure greatest in civilized Life: as there, there is most sensibility. - Savages have pain from want of Sensibility - hence they have anhabitually sour countenances. They have Mirth - but no Pleasure. - -
Pleasure of the sense of touch, is greatest in perfect health. - This sense is much disordered in some disians. - The Pleasure of Touch is greatest in the propagation of the species. - Next greatest, is kissing a sweet, pretty girl: - the next, holding & squeezing her soft hand, &c. When a ^{Gentleman} ~~gentleman~~ has the Liberty of playing with his sweethearts' hand, he has made considerable progress in the courtship. - at least, a good beginning.
A second Pleasure is from the temperature of the air, as in Italy - as Spring in England. June in America, Dr. R. has observed, has afforded very agreeable sensations. - A 3rd Pleasure is from breathing dephlogisticated, or Oxygen air. - a 4th Pleasure of the

sense of touch, is from the Warm-bath. -

5th. from the action of Walking after long rest - riding - sailing - hunting -

Dr. supposes the pleasure from hunt-
ing arises from the ^{pleasure of fear} risks which they es-
cape - & perhaps, the yell of hounds -
^{could not hear the hounds, for the "damned" dogs barking.}
The Citizen who went a hunting. -

Sailing in a balloon quickens the pulse
4 strokes in a minute - May be used
as a remedy at some future day. - 6th.

Pleasure, from the action of some med-
icines; & Aliment, on the alimentary
canal. - 7th. sudden relief from pain,
as Colic, or Labor - Pain aids the memo-
ry - as whipping when planting a land-

mark, &c. - 8th. from soft substances in
contact with the skin, as furs. &c. 9th.

from combing, and looking the head, &
suckling. &c. 10th. Rest after fatigue, &c. - An her-

mapnotite sensation is felt in tickling,
scolding, &c. - that is, a mixture of pain
and pleasure. - One more; the bodily pleasure
of laying. Butler, who died Nov. 4th. 1791. -
said it was not so hard to die; but like

Wentworth wished for a pen & ink to record the pleasure of dying. —
going to sleep. — The sense of touch is con-
fined to the fingers: that is, the accurate
sense of judging of the properties of bodies.
There is a great pleasure in feeling the
skin of children of 9 or 10 months of age. —

Decem. 6th. Lecture 2nd. — It is difficult to
draw the line of distinction, between the mind
of man and brutes. — Man is social animal;
so are some brutes. — Man is said to differ
from brutes, by anticipating; the Indians do
not anticipate. — Man is progressive in know-
ledge; so are brutes; as the learned pig, &c. —
Brutes, however, do not possess the sense of
touch: — they are unable to acquire a knowledge
of tools, &c. — to speak rationally. — They are go-
verned by present pleasures and pains; —
They cannot abstract ideas — have no sense of
Deity: — Man is as much a religious, as a
social animal: — Brutes were never known
to pray: — The most confirmed Atheist, when
suddenly taken with violent pain, will call
upon the deity with the utmost vehemence.
— The pleasures of Taste. — If man were only
called to eat, because it was necessary to his
existence, he would often permit others.

things to interfere; but he is impelled to that important, life-preserving process by another powerful incentive, viz. The Pleasures of the sense of Taste.— This operation is called for by 2 prompters, Hunger, and Habit.— The objects of this sense are extremely numerous.— High-seasoned, or delicious aliment, soon pales the appetite;— but that of an insipid nature, as bread, &c. we relish all our lives. It is probable there remain many new pleasures of Taste to be discovered.— Diseases have often been ^{suddenly} cured by indulging the patient in that for which he longed:— as water, musk & milk, &c. ~~but~~ not by any ^{peculiar} virtue in the object longed for, but by the pleasure it excited on the sense of Taste. — Pleasures of Smelling— Every mead, every plain, and every grove is tributary to the pleasures of this sense. The Rose stands first on the list of pleasant odors;— perhaps the sweet-scented shrub next ^{it is a compound of strawberry & pine apple,}

The pleasure from Odors is increased by Mixture.— By dew—as flowers are most fragrant in the morning.— The odor of flowers is improved by domestication, or being transplanted; but their exquisite hues are impaired by it. Just so with birds; their plumage is injured by confinement, but their melody improved. Taste is liable to perversion—as is evinced by the use of Tobacco, Asafatida, &c.— The smell of Flowers, &c. is medicinal; which constitutes one advantage of country air to convalescents.— The sense of Taste is increased by diminishing the other senses.— Where shall we find language to describe the pleasures afforded us by the Eye? Different degrees of Light, afford different degrees of pleasure.— The color of objects is pleasing: Children & savages, select a piece of gold first;— next silver &c.— The figure of objects affects the pleasure of the sight.— Round objects are most pleasing.— Hogarth's Line of Beauty is curved.— Man the best curved animal;— therefore the handsomest.

A Horse is said to be the next in beauty-
We have an innate admiration for ro-
undity- Motion affords pleasure to
the eye- Motions should be slow to
be graceful.- Sublime objects give
pleasure-as a volcano-a cataract, &c.-

Contrasts affords pleasure:- Hence, in
a Wilderness, a garden should be re-
gularly laid out;- & in a city it should
be irregular, & like a Wilderness.- Plea-
sure of Hearing.- We are surrounded
by this pleasure:- first our Mother's
voice; afterwards the voices of our fel-
low-creatures;- the music of Birds;- the
noise of quadrupeds;- of Insects;- of breezes;-
dropping rain;- purling rills;- &c. -

Pleasure, or good, predominates great-
ly over pain, or evil.- The enjoyment
of the pleasures of the Senses, are nearly
equal in all ranks.- While the Monarch
is delighted with the concert, the clown
is ravished with the thrumming of a
banyan- The Rose smells as pleasantly
to

to the milk-maid, when she is rigged up
in her clean duds of a Sunday morning,
as it does to a princeps. — The pleasures
of Taste and Smell are of the shortest du-
ration. — To heighten pleasure, Louis XV. used
to unite a bed of roses, a concert of Music,
and Coition! But they are discordant — We
can attend to but one thing at once. —

Proximate Cause of Pleasure — Motion
is essential to pleasure. — Pleasure consists
in a certain limited, definite motion; and
a regular order of the impressions which
excite those motions. — Pleasure consists in
a less degree of those ^{impressions, or} motions which cause
Pain — A high degree of distention produces
pain; — a less degree — pleasure. — Violent
Stimuli produce pain; — less violent,
or moderate stimuli give pleasure. —
A large dose of Opium, Spirits, &c. give
horrid sensations; — while a certain
quantity of those substances afford
the most exhilarating. — Pleasure and
Pain are therefore different degrees of
the same thing — which is — Motion —

Decem. 7th. Lecture 22nd. — Pleasure is a mere quality. — Weak impressions become acute, as water dropping on the scalp; while strong ones become weak, by repetition. Hence the reason why disagreeable impressions become agreeable by habit. — Pleasure, like pain is lessened by duration. — Opium alleviates pain only by being a stronger stimulus than the cause which produces the pain. — Final cause of Pleasure, is to impel us to eat, drink, exercise, propagate our species, &c. &c. Pleasures are so nearly related to pain, (being only different degrees of the same thing,) that they often terminate in pain. — Pleasures of the Mind. — They are of two kinds; — The pleasures of exercising our own faculties; — and of observing the operations of the mind in others. — First, of our own faculties; — The pleasures of Memory. — By means of this faculty, we live, as it were, our lives over again. — We enjoy pleasure over & over again by recollection. — Even the remembrance of pain, by repetition, reduces the mind to the Pleasurable point. —

point. — Pleasures of the Imagination. — By
this faculty, we enjoy every thing desirable:
we can ~~even~~ command legions, and build
castles in the air! — Pleasures of the Understand-
ing. — These are derived from a variety of sources,
as the discovery of Truth, &c. — Pleasures of that
faculty, or operation of the mind, called
Taste. — They are very exquisite; as in viewing the
beauties of Nature & Art. — Pleasures of the Will. —
consist in the freedom of willing & acting. — The
pleasures of the Passions. — Those of avarice are very
mean & groveling; — but those of Friendship and
Love create a little heaven upon earth. The
Pleasures of the Moral Faculties. — It would
require a pen made of a quill, plucked
from an angel's wing, to describe these plea-
sures! — Perversion of the Moral Faculties; we
see this in the pleasure some people take
in cruelty, &c. — A man, / and, O shame! a na-
tive America / once declared, that the most
delightful music to his ears he ever ex-
perienced, was the noise of the Guillotine
decapitating 20 or 30 persons! — Pleasures of
Agriculture. — ^{All the other pleasures combining to form these.} The war-worn soldier, and
the sea-beaten mariner, centre their hopes
in the prospect of ending their days on a farm.

Farm.—Pleasures derived from the ex-
-ercise of the Mental faculties in other
people:—These consist in hearing Orations,
&c. &c. Proximate cause of Mental plea-
-sure.—The mental faculties act upon
every part of the system.—The proxi-
-mate cause of mental pleasure, is an
equable, moderate distension of the
Brain.—Mental Pain is owing to
too great a distension:—but it becomes
agreeable by habit.—An Ugly Woman
when once loved, is loved harder than
a handsome one! Certain studies at
first disagreeable, become agreeable by
habit.—Is it likely that such a compli-
-cated fabric as the human body was
only designed to support us ~~through~~
through the short period of human
existence?—Certainly not.—It was de-
-signed to mature, & ennoble our immortal
part, by affording Wisdom & Knowledge!

Decem. 8th. Lecture 23rd.—Mind trans-
-ferable to other parts, where the brain
is wanting—like the senses when their
organs are deficient—Mind is supposed

to be transferred to the Medulla oblongata
or spinalis. — Sensation & Thought repose
themselves in sleep, like Muscular Motion
in rest. — Sleep in one respect, a tendency
to death: — consists in that point of de-
bility, happily called by Dr. Brown, the
"sleeping point." — Excitability is not a
fluid — which is wasted to produce sleep,
&c. for sleep may be induced at any time.
Sleep throws the excitability of unexercised
parts to those where it is worn out by
exercise. By this mean it has a tendency
to Life. — Cold feet & headache at night
are removed during sleep. — Causes which
induce sleep — are either Indirect or direct. —
Indirectly, sleep is induced by labor, when it is
very agreeable. — Large meals, liquors, opiates, &c. —
certain sounds. — Heat after exposure to cold. —
Long exercise of mind, &c. These stimuli induce
sleep by reducing the excitability. — Remote cause
by abstracting stimuli — as evacuations — oil on the
skin — cold — venery — cessation of pain — sedative pas-
sions, as despair. — Hence the disciples of our Saviour
slept during his crucifixion. — When the system
is below the sleeping point, walking, riding, eating,
small doses of Opium, &c. raise the excitement to

the sleeping point. - Some sounds - warmth,
as pediluvium - 2 asafetida pills have indu-
ced sleep when opium failed - certain acts
of the mind, which are similar & dull, as
counting 100 backwards - Light of morning -
& in night a small taper have often pro-
duced sleep. These stimuli should act
equally. Sleep begins by a pricking of the
eyelids - difficulty of keeping them open -
debility - stupor. Starting in sleep, is ow-
ing to the too sudden abstraction of sti-
muli. Abstraction of sensation & volun-
tary motion - Wt. take place. - 2nd. We lose
our irritability, &c. - Involuntary motions
slower in sleep. - pulse slower & fuller
in sleep - perhaps the heat of the bedclothes
help to make the pulse full. - as well as
the straggling excitability of the Muscles con-
centrated in the Arteries. - Peristaltic Mo-
tion of the Intestines lessened during sleep -
All the secretions increased, & excretions de-
creased in sleep - Hence great Sleepers become
fat. - The heat of the body is diminished
during sleep: - According to Hunter & Rush - but
increased according to Darwin. - The system
is

is weaker in sleep - hence gout & fever attack during that period. Children sleep much more than adults - Old people sleep little. - 8 hours are long enough to sleep. - longer injurious. - Few men have been distinguished who were great sleepers. - Term of sleep is formed by association. - A man once slept 14 days & nights, & on waking thought he had slept but a few hours. - We awake more suddenly than fall asleep. - Moral Faculty greatest in the morning. Therefore, always make bargains before breakfast. - Morning productions better than those which smell of the midnight Lamp. - The bodily strength least in the morning. - Courage less in the morning. - Direct debility then predominates. - Invalids should never travel before breakfast - not till 9 or 10 o'clock. - Some old people have said they slept none, and were yet well - but they do sleep - they wake unconsciously - like going to sleep. - Cause of Dreams. They depend upon imperfect sleep - or partial excitement. - Imagination is more busy than any other faculty. - Collapse of that part of the brain which is the seat of a faculty, occasions dreams, which, to that fa-
culty

faculty are absurd. — Mental Taste also suffers. — We never dream of any thing, The materials of which were not previously in the mind. — Nihil est in intellectu, quod non prius fuit in sensu. — For: infant ideas are often revived in sleep by association. — Some are recollected afterwards — some are not. — Images are more vivid in sleep than waking — owing to the abstraction of other stimuli. — The Will is more powerful in sleep — as in the emipio seminis. — Do we always dream? — Laborers dream but little. — Mr. Stuart, never dreamt after living wholly on vegetables. — Locke thinks the mind sleeps. We sometimes dream without recollecting it. — We sometimes recollect dreams by association during wakefulness. — & during sleep, we sometimes revive former ideas. — And that by the same power. — St. R. agrees with Mr. Locke; & also believes that dreams are morbid phenomena. — Old men dream a great deal. — A full or empty stomach — full bladder, &c. cause dreams. — We dream most in the morning. — When we fix an hour to wake we are wakened by the stimulus of the thought. —

Decem. 9th. Lecture 24th.— Suppose the sleeping point to be at 20:— When the excitement is above or below the sleeping point, Sleep cannot take place.— When it is above this, the remote causes are the abstraction of stimuli;— When below, they consist in the application of stimuli, which raise the excitement to the sleeping point.— We wake at any hour we fix upon, probably, by the Memory not completely subsiding.— Some people, particularly old ones, have related stories for facts, which they undoubtedly dreamt; by not being able to distinguish them from reality.— Hunger produces dreams about eating.— An Irish Minister who talked much in his sleep, once lay with a boy who ran a pin in his back; This enabled him to form a correct idea of a passage from ⁱⁿ scripture, which he did not, perhaps, understand before— for he exclaimed "Oh! now I understand what Paul meant by a thorn in "the Flesh!"— Somnambulists forget what they say or do in their sleep— so do Drunkards, during Intoxication.— The

we cannot recollect ideas when too great solicitude, or excitement exists; but when it is lowered to that point at which the Memory can act, we recollect them. When the excitement is not high enough, a walk, a glass of wine, conversation, &c. will do it. — Lovers do not dream of one another, except at the beginning or declension of passion; for during the height of it, the excitement is worn down so in the day, that none remains for night. — Dreams are not supernatural: if they were, they would be for the good of Mankind; and generals & statemen, &c. would dream the most; whereas they scarcely ever dream; — While every old woman is presaging the fate of a cream-jug or pitcher by her dreams!! — A disagreeable dream indicates incipient disease; — therefore the patient should use ^{temperance, evacuations,} gentle exercise, &c. The final cause of Sleep — is the recruiting the powers of the body & mind. — Pain is relieved by a recumbent posture.

Passions will subside in a recumbent posture:—Therefore a fellow should always go to bed when he gets in a rage! Dreams contribute to support Animal Life.—

Aliment.—Man is a carnivorous and a phytoivorous animal;—the conformation of the parts subservient to nourishment prove this; as well as his being unable to preserve health & strength without it. It is not barbarous to kill animals ^{humans} for our support;—It is doing a kindness to them.—Prevents them from dying with disease.—It allows them all to live a time: whereas they could not, if allowed to multiply as fast as nature prompts; for the earth would be over-run.—By this permission to live their term, they enjoy the animal pleasures; and to a greater degree than Man; because, enjoying fewer, they are greater in proportion.—

Decem. 10th. Lecture 25th.—Relative salubrity of Aliments.—is a subject much connected with Therapeutics.—A moderate use of agreeable diet, if the stomach will bear it.

it, ^{in general} is always wholesome. — The appetite & stomach ought always to be in Unison; for, if Aliment, however agreeable, do not agree with the stomach, it is unwholesome. — Wholesome substances, though disagreeable, should be taken; as some Medicines &c. — Aliment, in this country, is generally taken 3 or 4 times a day. — I suspect Men, like horses, should eat constantly; or at least, often and but little at a time. — A small portion of Aliment constantly in the stomach is most consistent with propriety: — during long intervals between meals, Tobacco & spirits are used as stimuli to supply the place of food; and after excessive meals, which induce indirect debility, those stimuli are likewise used to keep up the excitement. The evening is the best time to eat a full meal. Rest should not be taken horizontally after a redundant dinner. — Sleeping in a chair is not good neither; for the head goes awry and occasions headaches, &c. A semi-recumbent is the best. — Lying down after dinner is a bad

practice.— Taking spirits & bitters before meals, is injurious.— A small portion of some solid aliment, as raring, biscuit, &c. is much better.— It is not good to dilute the food by too much liquid of any kind. From half a pint, to a pint, and that at the end, or latter part of the meal, is quite sufficient.— After exercise, it is injurious to struggle half an hour at carving a tough fowl— Those animals should be cut up before they are brought to table. Drinking Healths is a bad practice at meal times;— It interrupts all at table, and causes some to swallow their food without masticating it; or perhaps, choaks them, in attempting to swallow it, in order to thank the one who drinks to their very good Health! It also spoils the relish for aliment by distracting the attention.— Eating should be done in silence. Aliment is divided into Animal, & Vegetable. The wholesomeness of food depends upon its solubility in the stomach; as do its nutritious qualities. The

The solubility of Aliment / animal /
depends upon the sex of the animal.
The flesh of females is most soluble.
That of males castrated, the next.
Animals which have ^{been} fattened slow-
ly, have the most soluble flesh. The
practice of charring, or baiting animals, ren-
ders their flesh more soluble in the
stomach. - Some flesh is rendered more
soluble by being kept a while - but pig,
goose, & duck, ought to be eaten the day
after killing, especially in warm weather.
Solubility also depends upon the meat
being thoroughly cooked - likewise upon
the suddenness of the death of the animal:
as by Electricity. - Keeping the Entrails
in fowls hastens putrefaction; & gives
a disagreeable odor to the flesh. - Putre-
faction does not generate Animalcula.
Soup is the most wholesome Aliment.
It should be the first dish - it damps
the appetite, & prevents excess in eating.
Broths should be made slowly - kept
near the boiling point - say 200°. keep
the pot, or vessel very tightly covered. -

We ought always to direct how Animal Food should be cooked for sick people:—It should generally be boiled;—roasted meat is more stimulating; and therefore suitable when tonics are required.—Peg Mullen, the famous beef-steak-roaster~~ess~~—roasted them on a smooth iron, which made them remarkably tender, and retained all their juices.—The crust of meat-pies generally disagrees with the stomachs of the sick—this is avoided by making the paste one half of potatoes—the other half of flour.—Stewed meat is more nutritious than boiled—for it does not part with its juices so much.—Fried meats are not easily digestible.—Meat cooked in a vapor is very good.—Fish is an intermediate aliment between animal & vegetable.—very proper for Invalids, & convalescents—after acute diseases.—Oysters are easiest digested when eaten raw, or warmed before the fire.—The flesh of land animals should not be eaten with fish—They disagree—except the former be salted.—Fish are said to favour procreation; but it is the exercise of the Fishermen; not their food which is so favorable to multipli-
cation.

cation. — During Lent the people used
to live wholly on Fish; — This practice ought
not to have been laid aside; for it was held
at the time when land animals were
propagating their species, and were unfit to
eat. — The nutritive qualities of animals
are various. — Quadrupeds proper most
nourishment. — Birds next. — Fishes
next. — Amphibious animals next, and
Insects next. — Eggs are of a compound
nature. — The Yolk of an animal, the albumen
of a vegetable nature. — Sound eggs have
always a warm end — discernable by the
tongue. — Yolk is most soluble — hence most
proper for weak stomachs. — Vegetable food
constitutes the greatest part of the food of man-
kind. — Vegetables should be boiled a great
deal. — Though cabbage is best when boiled
about 10 minutes. — It should not be boiled
with meat. — Milk constitutes the food of
all for the first 12 or 15 months. — With our
food we use condiments. — Salt, all children like it. —
A teaspoonful of salt after a full meal would
be better than any dram. — Vinegar is very good. —
In summer our food should be well spiced. —
Mustard, & Horseradish should be used moder-
ately — they impair the tone of the
stomach when used in large quantity. —

Decem. 14th. Lecture 26th. - Methods of preserving
Meats. - Drying them in the air or sun - by
freezing - by smoke - in molasses, &c. and by
common salt. - Meat is best preserved by
applying salt to it while warm with
Life. - Salt meat is more wholesome than
fresh in summer. - There are two good me-
thods of preserving hams - viz. in cut straw,
and in separate bags. - There is another
method of keeping meat in the state of
portable soup. - Aliments are nourishing
in proportion to the sugar they contain. -
We can eat more potato than parsnip
because the latter contains more nourish-
ment. - Pork is more nourishing than
Beef because it contains more oil. - The
nourishment a substance contains, is
in proportion to the quantity of sugar
and oil. - The quantity of Aliment neces-
sary in a day for one person is different
in different people. - Old men require
more than middle-aged. - We require
more food in winter than summer
to keep up the excitement. - The quality
also

also, of food must regulate the quantity. -
We require twice as much vegetable as Ani-
mal food. 8 lbs. is more than most men
require in a day. - The stimulus of disease,
thinking, &c. supplies the place of food. -
It has been disputed whether food should
be taken warm or cold. - Warm food is
the better. - Tea & Coffee contain no nou-
-rishment, except the sugar & cream which
is blended with them. - but they exert a
stimulus in another way. They gently
stimulate ^{the whole system through the medium of} the nerves & brain. - Coffee
acts primarily on the brain. - Tea on the
nerves ^{& muscles}. - both fine stimuli. - They prevent glut-
-tony and sottishness. - Dr. Johnson. - They are
good after great fatigue of body. - & of mind. -
after great meals. - intemperate drinking. -
taking opium. - good in grief. - &c. They should
be made pretty strong. - Coffee is better than
Tea to procure watchfulness. - it keeps us
tranquil, while Tea affects the nerves. -
Strong coffee aids the system against cold. -
Coffee should be well dried, and moderately roast-
-ed. - and bruised instead of ground. - It is
more ^{cordial} when drank without sugar or cream.

Tea has been said to be a slow poison—^{The Father of} Anthony
Benezet, on being told this, replied, "It is indeed
"a slow poison; for I have been in the habit
"of drinking it ^{twice a day} these 50 years, and am alive yet!"

Drinks—fermented, & distilled—Sweet wines are
most nourishing—Red wines are least nourishing.
White wines are the best for the people U. S.—
are more stimulating, &c.—Malt liquors abound
in saccharine matter—it is good for laborers—
but not for sedentary people—Porter is the
best malt liquor—because it is older before it
is used than others—Always prescribe Porter
for sick people when malt liquor is proper—
Cyder is good for laborers—but causes gout
& rheumatism in the sedentary—it is im-
proved by boiling—when 4 years old is nearly
as good as wine—Distilled, or spirituous liquors
are bad—contain no nourishment—A thousand
tongues could not exhaust the catalogue of their
baneful effects in every country! They are
best, or rather least hurtful, in the form of
punch.—Water is the most salubrious drink
in every age and in every clime—Are we
dry? Water is best to quench thirst—Are
we feverish? Water—Are we just emerging

from a drunken frolic, oppressed with nausea,
&c.? Water is the best drink to allay the
sickness. This healthful & copious fluid
seldom fails to ensure health & longevity.

Cause of Appetite - Boerhaave ascribes it
to vitiated bile & gastric juice - but commonly
appetite is excited in a certain degree of
relaxation of the stomach; which is the
hungry point - below this is anorexia -
hunger has great influence on the mind,
morals, &c. - it causes men to kill & eat
each other, &c. When the stomach is below
the hungry point, cheerful company, &
other stimuli, raises it to it. - Appetite
is increased by high & dry situations -
may be suspended by Opium, Tobacco, &c.
It may also be suspended by stimuli -
tiny passions, or impressions - mores on the mount -
Some animals suspend the appetite by
swallowing balls of mops, or resin -
Where is the seat of thirst? When
drink cannot be had, thirst may be sus-
-pended by washing the fauces with acid -

Decem. 13th. Lecture 27th. Food is seldom
swallowed unmasticated without injury to
the stomach. In what manner is food di-
gested in the stomach? The stomach is a
most important organ - once said to be the
seat of the soul. Diseases are often induced
through the medium of the stomach; but, Dr.
R. believes, oftener expelled. Digestion is ef-
fected mechanically and chemically - by tri-
turation and solution. Dr. Pitcairn's assertion
that the stomach possesses a force equal to
12951 pounds, does not deserve to be contradicted.
Trituration does not do much towards digestion
- putrefaction does not assist. The gastric juice
and saliva chiefly effect digestion, by the aid
of heat, & solution, ~~and fermentation~~. Some a-
nimals possess ^{vide Dr. Hays's thesis, you will there read} more gastric juice than others.
- Dr. Rush's opinion of digestion
it is very powerful in man - and still more
active in children & old people than middle
- aged. The gastric juice acts most easily when
the food is well cooked and masticated. The
gastric juice has been said, by Jno. Hunter, to be

erode and dissolve the stomach after death - Dr. R. is doubtful of this - he is disposed to ascribe the erosion & dissolution to other causes. - There is a disposition in certain parts of the body to dissolution, from inflammation; &c. - To inflammation & mortification he thinks those cases of erosion are to be attributed. - Spalanzani found digestion to go on after death while heat remained. - The peristaltic motion of the bowels is continued after death; as we see by the discharge of excrement. - The gastric juice coagulates milk, as is proved by the use of rennet, or calves' stomachs. - Fermentation is rejected by the Moderns from the list of the agents in digestion - but Dr. R. says he will defend it. - There is a partition in opinions as well as in drugs. - A circumstances are necessary to fermentation; viz. heat, moisture, air, and rest. - These all attend when digestion is well performed. - There is a deficiency of gastric juice in Dyspepsia - as when smoking or chewing of tobacco is carried too far. - The contents of the

Stomach are acid 3 hours after deglutition, which proves fermentation to be an agent in digestion. Much motion after eating prevents fermentation, or hastens it too rapidly. The heat of the stomach is favorable to it. The saliva contains air. Phenomena of digestion.

1. A slight fever comes on after a full meal. therefore we should eat heartily when we go into the cold.
2. Sleepiness arises from indirect debility, induced by a full meal.
3. The Mental faculties are affected.
4. A disposition to rest. Patients in chronic disease should eat little and often. Apoplexy and death are often caused by full meals in delicate habits. The passions influence digestion. Cheerfulness promotes it. grief retards it. Is there not an increased influx of nervous fluid / call it what we will / to the stomach during digestion? Food after passing the pylorus is called chyme. And mixing with the other fluids, forms chyle, & the basis of the juices. The chyle is taken up by the lacteals. Juices proceed through the anus.

Decem. 14th. Lecture 28th.— We have supported the doctrine of a fermentative process in the stomach— The experiments, however, have not been complete, so as to justify a decisive conclusion.— We now proceed to consider the Blood; which, taken collectively, is a homogeneous mass— but spontaneously separates into two divisions called Crasamentum & Serum— The crasamentum is subdivided into Lymph & red globules— &c.— The blood coagulates, in health, when exposed to the air.— The larger the stream of blood from a vein, the slower the coagulation— It coagulates slower in a deep, narrow vessel than in a shallow one.— The blood assumes an appearance, from a variety of causes, which is denominated sizy— The blood of Women who have been 5 months pregnant is generally sizy— It is mostly sizy in the Spring of the year— After exercise, &c.— There is a state of the blood, wherein no separation takes place— This occurs in the highest grade of

Morbid action; in consequence of the violence of which, it becomes dissolved. Blood drawn from the Arteries is dissolved? - A young Gentleman who graduated last year, exposed himself to a heat of 140 degrees Fahr. by which mean his blood was dissolved - hence it is not owing to a ferment in the blood, as Dr. Cullen supposed. It is owing to violent action. It is excess of Serum which occasions dropsy. The red globules are not quite globular. They are not oily, but inflammable; ^{their color is} owing to the oxygen they contain. Good health is connected with a proper proportion of Oxygen ^{and red globules} - it gives tone to the blood & fibres. It is sometimes the cause of disease. The blood contains a portion of air. It is an essential mean of sensation. How various & wonderful its uses in the animal economy! Lymphatics - The Lacteals are included in this system. They are furnished with valves. The lymphatics originate from the whole surface of the body, pass thro' conglobate glands, and terminate in the thoracic duct. They have coats analogous to bloodvessels.

to bloodvessels, but stronger - They are capa-
ble of retrograde motion - vide Darwin - How
is the chyle converted into bone, tendon,
&c.? It is done by secretion - How is it
taken up by the Lacteals? Dr. R. supposes
it to be by ^{muscular action of the lymphatics} attraction - action of the Arteries? &c..
Lymphatics are to be found in every part
of the body except the head - but many
circumstances justify the opinion of their
existence in the head - for instance, hydro-
cephalus, &c. Veins do not absorb lymph -
they absorb solid matter - &c. The lymphatic
and sanguiferous systems are at conti-
nual strife with each other. &c. poisons
upon the skin do no injury - Mercurials, &c.
do not act until they inflame (denude?)
the skin - Attend to this fact, Gentlemen -
More experiments are necessary upon this
subject - This, however, is a fact, variolar
matter cannot be communicated by the
skin, unless denuded - If it should be found
that absorption does not take place on the
skin

skin, it will prove that the plague is taken
by contact- &c. The lymphatics are excited into
action by distention- &c. They perform important
services in the animal economy- They may
be compared to scavengers- Travellers through
the deserts of Arabia carry wet sponges to their
mouths- The unwholesomeness of stoverooms
may be remedied by setting a vessel of
Water on the stove- It renders the redun-
dancy of sensible heat, latent- When we
reflect that the Lymphatics, which are
now known to be of such extensive use
in the animal economy, were discovered
no longer ago than 1652, we ought to be
modest in our attainments, and look forward
for more discoveries; even of greater consequence
than the Lymphatics! —

Decem. 15th. Lecture 29th. — Secretion —
Dr. R. began this Lecture by acknowledging
that he knew no more about secretion
at present, than he did when he began
the study of Medicine. — Glands are a very

very important part of the body - They are proved to be vascular by the injections of Ruyoch - The secretions are limpid, viscid, ceruminous, &c. - The different secretions are supposed by some to be effected by the different formation of the glands - Others suppose the varieties are produced by fermentation - Dr. Rush inclines to this opinion - He means by fermentation, a new combination of the simple parts of the fluid - The secretion & formation of varidous matter favors this idea - Glands are like closets in a well-furnished house, which supply the various wants of the household - Different secretions - Lymph, Saliva, gastric juice, pancreatic juice, Mucus, Synovia, Urine, - a direct passage from the prima via to the bladder; or else a retrograde motion of the lymphatics - Semen, - it becomes thick by standing, or remaining long undischarged - thin and bloody by Onanism - Mucus of Prostate ^{glands}

gland, Milk—Dr. R. inclines to believe that Milk is secreted immediately from the chyle, after it is poured into the bloodvessels, because so great a quantity is secreted in so short a time—The secretion of milk is much influenced by the passions.—Excretions.

Feces,—Alexander the great, observed that his passion for women was the only thing which prevented him from believing himself a god—but, says Dr. R., he might have found a much more humiliating criterion of humanity, in the necessity which the human species are daily under, of making this disgusting & loathsome excretion!

Bile, has long been considered an excretion, but it acts partly as a secretion—The liver is a manufactory of sal ammoniac—The natural color of bile is yellow—acids make it green—Malignant fevers render it black—It overflows during violent passions—Mad people have a great flow of it—*Hydrogene gas affects the liver specifically—so do marsh miasmata—fat is an excretion.—*The overflow of bile in Mania is not the Cause, but the effect of that disease.

Decem. 16th. Lecture 30th. — Excretions
continued — Perspiration — We know there is
such an excretion, by washing the arm, &
exposing it in a glass — the perspirable
matter then becomes visible — It is merely
discharge from the extremities of the
small arteries. It is composed of water, salt,
and carbonic acid gas ^{and azote} — renders lime water
turbid — extinguishes a candle when put
under the bed-clothes — When long confined
in clothes, &c. it generates Typhus fever —
Is the odor it emits a specific quality,
or does it depend upon circumstances?
A Carpenter emits much more than a
Watch maker, ceteris paribus, as it respects
health & constitution — This excretion is dif-
ferent in different countries — Dogs dis-
cover their Masters by it — Dr. R. told us
of a Man who could tell by the smell
of a Lady's perspiration, whether or not
she had lost her Virginity! A Lady had
a Cancer which discharged a mild matter
when she lived on vegetable diet — but a

a single meal of animal food would render it
extremely fetid - Spirit of Turpentine have
been smelled in the perspiration 5 weeks
after taking them - Dr. - Miasmata are said
to float in the system 20 days - Dr. R. believes
they may much longer - Is there any differ-
ence between sweat & insensible perspiration?
Dr. R. answers no - There is a constant
harmonizing between the perspiration and
Urine in health - A decrease of perspiration
is followed by an increase of Urine - The
perspiration is sometimes sweet, as in dia-
betes - sometimes acid - sometimes saline -
sometimes fetid, as in Malignant fever -
Patients seldom recover after these / fetid / sweats -
Sweats are sometimes viscid - sometimes
yellow - sometimes bloody, from extreme a-
somy - There is a plant growing at Hatchez
so stimulating as to produce this sweat -
The quantity of perspiration is different
at different seasons, and under different
circumstances - The discharge by perspira-
tion is greater than that by stool & Urine

both. In England, 33 $\frac{1}{2}$ is perspired in a day. In Italy, $\frac{5}{8}$ of all the food taken is perspired. Thus heat influences it. Passions, gratifications, &c. affect perspiration. We perspire double the quantity in the sleeping, to what we do in the waking state. Hence the advantage of lying in bed in the beginning of ^{colds, and} fevers, &c. Nutrition.

Dr. R. was once of opinion with Cullen, that the nerves were the Agents, or sources of Nutrition - but he has long since changed it. He now believes, with Monro that Nutrition is performed by the Arteries. It was formerly supposed that the nerves were the part of the body first evolved - but the Arteries are formed first of all - or, at least, are first in action.

Order of Life, or action - first, the blood acts upon the ^{heart &} Arteries - the ^{heart &} Arteries upon the brain and nerves - and these react upon the ^{heart, arteries, and blood.} body - or muscular parts. Valli considers the origin of the nerves to be on the surface of the body - and their termination in the brain - the

The idea is a good one - Dr. R. is disposed to adopt it. If nourishment were conveyed through the medium of the brain & nerves, these parts would bear proportion to the size of the animal - but this is not the case - a limb will be nourished when the nerves are destroyed - but not when the arteries are. The conveyance of the coloring matter of Madder to the bones is also against this doctrine of the nerves. Peculiarities of Females - They are, in general, less than males - Acquire their growth sooner - their simple solids more delicate - Arteries possess more contractility - Nerves more sensible - the brain more mobile - Bones different - Pelvis wider - Organs of Generation different - as every body knows! The periodical discharge from the uterus is peculiar to females - Their breasts secrete milk - They move the Thorax in respiration - whereas males move the abdominal muscles more - This is so conspicuous that a Physician of observation can distinguish the sex by it in children of one or two years old when in their frocks - The voice of females is more soft and shrill than

than males. - The Female Mind is
not originally like that of males - but is
as different as their bodies. - Females are
the avenues to Reputation in Medicine,
and therefore their Mental Qualities &
powers ought to be well understood by
Physicians. - Females have a less vigorous
and comprehensive Understanding than
Males - they excel males in Imagination -
they excel in the recollection of events &
words, but not of ideas - hence the Indians
commit their traditions to their Squaws -
Women are superior to Men in point
of Taste, as is shown by their dress, &c. - Young
Men who keep the company of Ladies
improve much in behaviour, taste, &c. -
The Moral faculty is more acute in
females; and more active, but less general -
hence they are more devout, &c. - Females
have more ^{and humanity} charity than males, but less
benevolence - They have less Conscience
than males! - Their Perceptions are quicker
but their ^{judgmental} Reasoning powers are ^{less acute & comprehensive} weaker -

They have less Courage, but more Fortitude.
They are more communicative than males.
Women tell other people's secrets - but
Men tell their own - Women are less
disposed to forgive Injuries than Men -
Let not the young Champion for female
excellence, says Dr. R. - think that I detract
from Divine Goodness in making these
observations - Do not suppose I am past
that period of Life wherein I can take
pleasure in female Society - This is not
the fact. - This difference in the Sexes is
essential to Love and Harmony - Females
are less given to venereal appetite than
Males - are more Modest - They are
different, even in the Womb. —

Catamenia - This occurs, in the middle
states of America, about the age of 14 years - &
ceases at 45 or 50. - It occurs sooner in high
Life than among the laboring class - and con-
tinues later. - Three girls in Philadelphia began
to menstruate at 7 years of age. - At the time
of the eruption of the Menses in Girls - their
breasts swell - They acquire sexual ideas, &

become in every way more agreeable. Women who drink hard, menstruate till near 60. This discharge has returned at 70. Some women menstruate all the time they give suck. The quantity of blood discharged at one period, is from 3 to 5 ounces. The discharge continues from 3 to 5 days. When the Menses appear during lactation, they point out the time to proceed with the duty of Child-bearing. Cause of Menstruation. Most Writers agree in ascribing it to plethora, either general or local. Dr. R. is disposed to ascribe it to both general & partial plethora. It is first general, and then local. The inefficacy of bleeding in preventing this discharge argues nothing. Perhaps its regular appearance is owing to the influence of ^{Ideas and Motions} association. Menstruation may be called an Hæmoptisis of the Uterus. Women are most susceptible of impregnation about this period. Brutes are disposed to venery once every year, by a discharge from

from the Uterus— Women have a discharge Monthly, and therefore, are always ready—Monkeys menstruate,—hence it appears, that like the human species, they may become pregnant at any season of the year—The Spring of the year is the common period with most animals—but there are several exceptions.—

Decem. 17th. Lecture 34th.— The Parts of Gene-
ration have considerable influence upon the
body at about the age of 14 years—^{In males,} The voice
changes—bones of the nose enlarge—body be-
comes more robust &c. This change has been
supposed to be owing to the absorption of
semen—but this is entirely hypothetical—
It is owing, more likely, to the stimulus
of the semen on the seminal vessels;—
whose connection with the system generally
is very extensive—The shrill voice, & want
of beard in Eunuchs, is owing to the ab-
straction of this stimulus—Even the
stomach and bowels are influenced by
this delightful stimulus—In females, at
the age of Puberty, there is a distention of the

Uterus which occasions other changes. - 16 years in Females, and 24 in Males, is the earliest time we ought to Marry. - There is no state in which Mankind do not enjoy the venereal appetite - they possess it at all seasons. - Monogamy is best to health, as well as to Morals. - In this case, happiness and excitement meet together, and there is no danger of excess. - The Law of Moses, allowing Polygamy, was a just punishment. - A man then, by that Law, was obliged to marry & maintain every virgin he defiled. - Dr. R. thinks such a Law would have a good effect at the present day. - Amphibious animals derive the most pleasure from Coition. - Frogs enjoy the greatest venereal pleasure. - Vide Spalarzani. - The Male ^{toad} frog will suffer amputation of his limbs before he will resign his amorous armfull! -
and even decapitation, accordg. to Spalarzani!!

Conception. - Of this subject we may say that "Shadows, clouds, & darkness rest upon it!"

It is now believed that the Animalcules of the male seed are not the rudiments of young fetuses. The female ovum contains the germ, which is excited into action by the stimulus of the semen masculinum. How is the male seed brought in contact with the ovum? pregnancy has been procured by a penis but one-fourth its natural length. Conception has taken place when the semen was only inserted at the mouth of the vagina. — Harvey supposes it to be effected by absorption. Dr. R. ^{inclined to this opinion} supposes the semen acts specifically on the ovum, as no disease occurs in consequence of failure of impregnation. — The meneses are probably discharged by the peristaltic motion of the uterus and vagina — perhaps the semen may be carried to the ovaria by peristaltic motion. — This is John Hunter's notion? — It is not so plausible as Harvey's. Females conceive readily after a spell of sickness — long absence from home — travelling to a new country, &c. — Conception cannot take place unless semen

semen come in contact with the ovum -
It is succeeded by pains, nausea, &c. - These are
owing to new action - The final cause
of this nausea, says Dr. Hunter, is to pre-
vent Inflammation. - Propensities -

A Lady assured Dr. R. that always, after conception, she felt a disposition to steal every thing she saw &c. &c. - Some have peculiar sensations as glowing of the leg, &c. - Others have none of what are called breeding symptoms - The Semen is a stimulus of a peculiar kind - it seems to be secreted, not only from the fluids, but from the solids - not only from the body, but from the mind. - Hence the resemblance between children & parents? - Having them always before their eyes may have some effect. - hence the general resemblance of people in cities - but there is a resemblance in infancy, before any notice is taken. - Thus, Gentlemen, I have ventured to tear the veil of mystery. - Our ignorance on this subject is owing to a want of sufficient observation. - In future, says the prophetic Dr. R. I doubt not but the process of

of Generation will be as well understood
as chemical Mixture is at present.—
Animal Life, the Human mind, and
Generation are, as yet, 3 profound mys-
teries.— Bastards are said to have more
genius than those legitimately begotten.
A curious Author supposes it to be ow-
ing to the uncommon action of their
Parents' minds, at the moment they
are snatching the transient Pleasure!

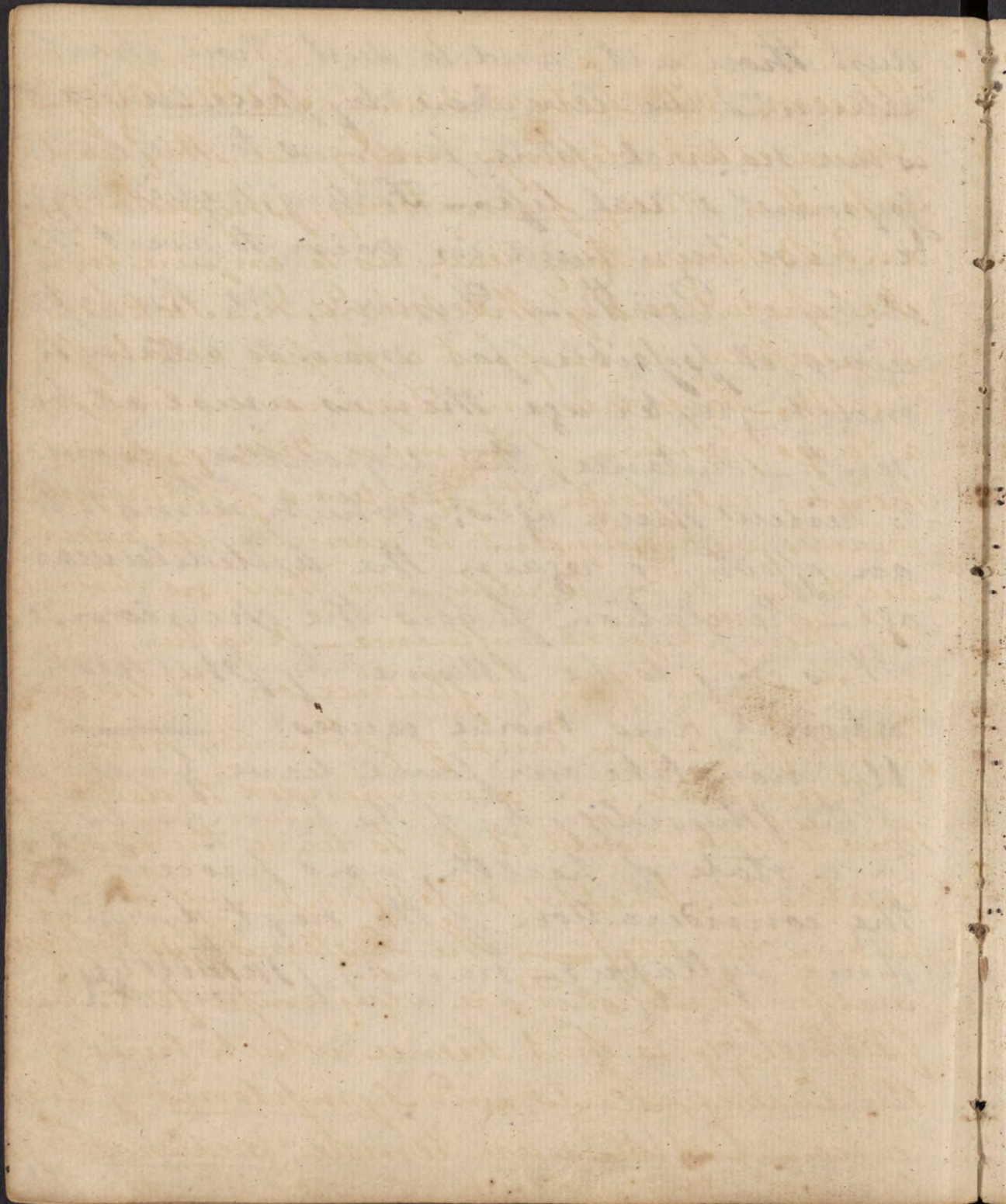
Decem. 18th. Lecture 32nd.—Pregnancy—
The ordinary period of gestation is 9 months;
but Authors mention cases of 5 & 13 months.
Pain is supposed to be necessarily connect-
ed with childbearing in consequence of
the Curse pronounced upon Eve—but in some
countries this curse is not known.—Hence
Dr. R. infers, that pain is not necessarily
connected with parturition & childbearing—
vide Brydone.—The turks take sweet oil
previous to their labors— it acts by in-
ducing debility, and thereby lessening

the pain;—for delicate and feeble women
have the easiest labors.—Bloodletting has
the same effect.—This was Dr. R.'s opinion
12 years ago; and he is now more convin-
ced of its truth.—The pain of Parturition,
says Dr. R. is as much a disease as
Pleurisy, ^{and to be removed by the same remedies viz. Section, &c.} or the effect of disease? —

The Marks which occur on children at
birth, have been ascribed to the imagi-
nation of the mother during pregnancy—
but this is Unphilosophical.—The
system is more disposed to Plethora dur-
ing gestation than at any other time.
We have thus, Gentlemen, according
to our Syllabus, taken a view of the
functions, &c. in a healthy state—
when the excitement is regular—the
exciting causes & the excitability are equa-
ble.—It is thought, by some, that the
Antediluvian age may be attained to
by the aid of medicine—But "durst

"dust thou art, and to dust thou shalt
"return."— We live here by force— and death
is our natural state previous to our en-
joyment of real life.— Fasting, medicating,
&c. have been used in vain to avert the
stroke of Death.— However, Dr. Rush be-
lieves it possible for man to attain to
much greater age than is usual at pre-
sent.— Instance, the disposition of some
to renew their ages;— which seems to be
an effort to regain the antediluvian
age— Revelation favors the opinion, &c.
It is only to be attained by physical,
rational, and moral causes! —

We now take our final leave, Gentlemen,
of the Physiology, &c. of the human body
in a state of health, and proceed to
the consideration of the next division
of our Syllabus— namely, pathology.—



Decem. 20th. Lecture 33rd. — Pathology —

Diseases are blessings in disguise — they lead us to the study of Anatomy, Physiology, and Botany — they lead us to enquire into the operations of the mind, &c. — Sickness is necessary to impart a proper relish for health. — Hospitals and Dispensaries include a large portion of human misery, and thereby call forth the exertions of humanity. Diseases are kindly sent to reconcile us to death; — death would be terrible, were there no diseases. By their physical influence — or rather, physical evils, by their influence, on the Moral Faculty, are the cause of good. — By pains & sufferings we are recommended to death. — How terrible would it be to leave the world in a healthy & happy state! / i.e. himself in a happy & healthy state. — The Systems of Pathology heretofore published, are very imperfect. — Pathology is that Science which treats of the Causes, seats, and Symptoms of diseases. — Causes — are remote, predisposing, occasional, or exciting, and proximate. They

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They may be better understood by an illustration
- for example, Cold acts as a ^{of Inflammatory fever.} remote cause - the
debility which it induces is called the pre-
-disposing cause - subsequent exposure to heat
constitutes the occasional, or exciting cause.
and the first morbid action is denominated
by Dr. R. the proximate cause. - But those
causes do not always occur in this order.
Remote, exciting, and even predisposing causes
often act together. - The predisposition to dis-
-ease is often so great as not to require an
exciting cause - hence the remote may some-
-times act as exciting causes. - Miasma is the
remote cause of fever. - All diseases, except
Wounds, and some local diseases, depend upon
predisposing debility. - Debility is divided
into two kinds, viz. direct and indirect. -
When the accustomed stimuli are abstract-
-ed, or a part of them, direct debility
takes place - When more stimulus
than usual is applied, indirect debi-
-lity is brought on. - Suppose the healthy
point to be at 50. - An addition of stimulus

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stimulus would induce indirect debility.
If stimulus be abstracted when the sys-
tem is at this point /50/ of excitement,
direct debility is the consequence. - These
two kinds of debility are so nearly alike
in their effects, that they are only to be
distinguished by their exciting causes. - The
range of predisposition is about 10 above
and below the healthy point. - Debility
is the predisposing cause of all the evils
in the world; both moral and physical.
- Dr. R. is of opinion that there are no
positive evils; but that all evils are mis-
placed benefits. - Small pox, measles, pesti-
lential fever, &c. are not positive evils.
They may serve valuable purposes. -
A crumb of bread in the trachea is not a
positive evil - it is only a good in error
loci. - Miasma is far from being a real
evil - it is a cordial - supplies the want
of food, &c. If we could bottle it, & preserve
it, perhaps a better cordial could not
be introduced into the Materia Medica.

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It is only in an over-proportion, that it is injurious. How much more fatal is an over-dose of Opium? Yet who would contend that opium is a positive evil? - What is poison to man, is agreeable to some other animals, & vice versa - so that the evil consists intirely in the error loci of the substance. - Pain, bad smells, &c. are not positive evils; - pain is a different degree of that which constitutes pleasure - bad smells are useful to some animals. - Vile insects, &c. are not positive evils; - they are only evil in error loci. - The spider, which is so offensive in our houses, is useful in our stables, &c. Moral evil consists in a derangement, or error loci of the virtues. - Owing to the loss of the Will, the faculties become displaced - it is the main pillar of the mental fabric. - When the Will is destroyed the mind tumbles down. There are no new faculties introduced into the mind to create evil. - It is caused by the derangement of the original faculties. - Pride is nothing more than misplaced dignity.

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Envy is dislocated emulation. Every vice is a misplaced virtue; or a virtue out of joint. This opinion did not originate with Dr. R. It was first published by a Mr. Edwards. Pleasure is increased by contrast. The effects of negative evil, are all positive. Debility is succeeded by increased Excitability. Debility is the Inviting cause of that excitement in which disease consists. The Electrical rod does not more certainly invite lightning, than debility ^{whether general or local,} does disease. The increase of excitability, which succeeds debility, is nearly the same, whether it be direct or indirect, provided it be brought on suddenly. Disease consists in irregular excitement. There is but one remote and exciting cause of disease, and that is Stimulus. Stimulus is a genus! the first effect of stimulus, is tonic, then atonic, next irritant; which induces Morbid action! Equable excitement is health - irregular excitement is disease - the art of healing consists in equalizing it. Debilitated parts in the body, like mi

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minus clouds, attract the plus, or excessive excitement of other parts, and produce an equilibrium. — Pain is not a disease, but a symptom; like thirst in fever, &c. — When Dr. R. formerly told his class that there was but one fever, it startled them; — He now asserts that, there is but one disease in the world! and that consists in irregular excitement. — Obstructions, schirri, collections of water, &c. are not diseases — but the Effects of disease. — There may be disease without pain, as is sometimes the case in Epilepsy, Hectic fever, &c. — When effusions, &c. produce death it is by reaction; thereby producing morbid action. — Dr. R. makes a distinction between Disease and Disorder: — Hepatitis is a disease — obstruction is a disorder. — Thus, says Dr. R. have I laid open my Theory before you — I have been called a Brownian; but I am not. Brown says there are asthenic diseases; I say there are none; — Asthenia is only predisposition to disease; it, however, requires attention. My Theory is so simple, that you will lose more than gain at my Lectures.

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Decem. 24th. Lecture 34th. - Cold is the remote cause of Inflammatory fever - the debility induced, is the predisposing cause - the heat of a stove-room, or vernal sun, the exciting cause - and a convulsive action of the Arterial system, or the disease itself, is the proximate cause. - Suppose healthy action to quit at 50 - when stimuli are abstracted, direct debility is induced. When added, indirect debility is the consequence. In chronic debility of both kinds, the excitability is expended: - but when the system is debilitated suddenly, either directly or indirectly, the excitability accumulates.

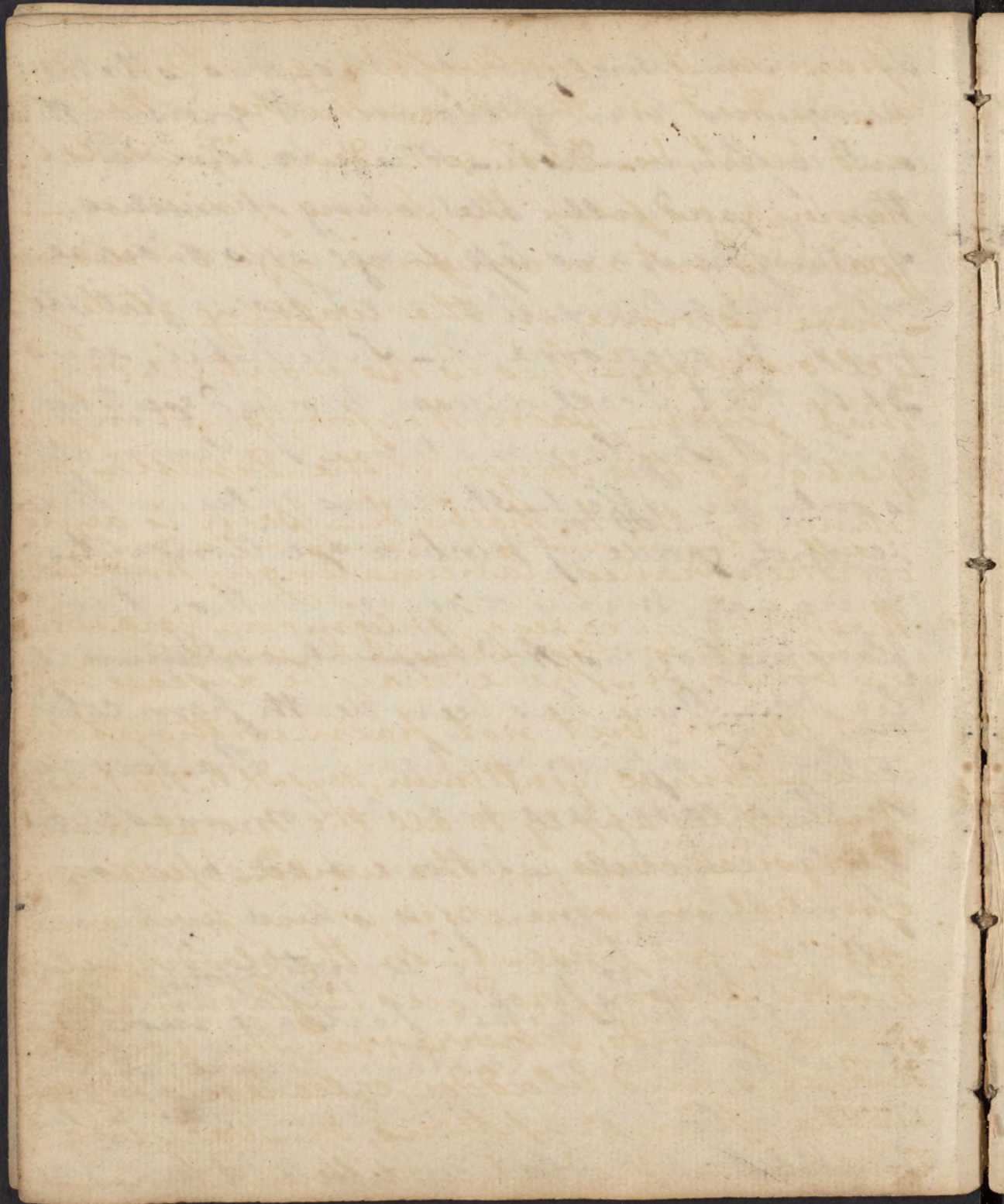
Yellow fever may be brought on by infection, fasting, &c. - here the excitability accumulates, - but if the abstraction be made gradually the excitability is diminished, and the Miasma has nothing to act upon. - Labourers should continue their labor in order to escape yellow fever; for if they abstract the stimulus of labor, the excitability accumulates, and the Miasma takes effect. E.

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Excitement may be excessive, or preternatural, without being morbid. - It is irregular, or Morbid Action only which constitutes disease. Disease, like fire, is a Unit however excited. - Disease is always partial - there is no such thing as Universal disease. - Fever is confined to the bloodvessels - Mania to the brain, &c. - The bloodvessels possess great irritability - but, happily for us, but little sensibility. - Brown places all diseases in debility. - Dr. R. denies its being a disease. There is but one predisposing cause of disease, which is debility - one exciting cause, which is stimulus - and but one proximate cause, which is Morbid Action. Disease occurs in the following forms; 1. Convulsion, as in fevers. - 2. Spasm, as in ^{and tetanus - divided into homic & clonic} colic. - 3. preternatural heat, which is local, as in the skin, head, bowels, &c. - 4. Great Itching, as about the anus, &c. - 5. Shocks of Pain, as in the gout - called Aura Arthritica - 6. Suffocated excitement, when sensation & motion are suspended.

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as in some malignant fevers. This is the most dangerous form of disease - it exists without inflammation. It is to be relieved either by gradually abstracting stimulus, & exciting new, and less dangerous disease, or by applying the most powerful stimuli to overcome it. Take notice, says Dr. R. that I call disease Morbid excitement, and not Inflammation. Inflammation is only an effect. It occurs only in the second grade of Morbid excitement. There are many diseases without inflammation; as ~~Hydrocephalus Internus~~^{phopica}, Cholera, &c. There has been death from colic without inflammation in the bowels; In this case, Morbid Action was above Inflammation. No one disease is confined to one form of Morbid excitement; all the forms occur sometimes in one disease, ^{and in all parts of the body in malignant fever.} - but certain parts are more disposed to take on certain forms; as convulsive action is the form which the muscles and blood vessels take on. Spasms



Spasm in the bowels—Itching in the pruden:
dum—Heat in the skin—Shocks in the head
and breast, ^{as in gout,} &c. Dr. R. excludes cold, sweats, &
hemorrhages from the forms of disease—
Pain is not an uniform effect of disease—
There is none in the walking state of
yellow fever—This is the worst grade of
that fever—Pain, therefore, is not in pro:
portion to the danger of the Disease—In:
stance, in the toothache, &c.—Pain is acute
in ^{dull in} ~~membranes,~~ ^{Haynematous parts, shading on the skin &c.}—lancinating in muscles,—
throbbing in cases of phlegmon,—gnawing
in ^{twisting in the bowels, & cutting in the joints, &c.} bones, &c.—There may be disease with:
out pain, but not pain without dis:
ease.—Observe, Gentlemen, says Dr. R. that these
principles apply to all the moral and
physical evils in the world.—Infection is
essential in some cases where fever and
size is not present.—In the bloodvessels,
morbid action produces inflammation ^{& congestion}
in the glands, schirri; in the joints,
kidneys, and bladder, calcareous matter;
in the skin, eruptions, &c.—Varying
the effect, or product, in different parts.

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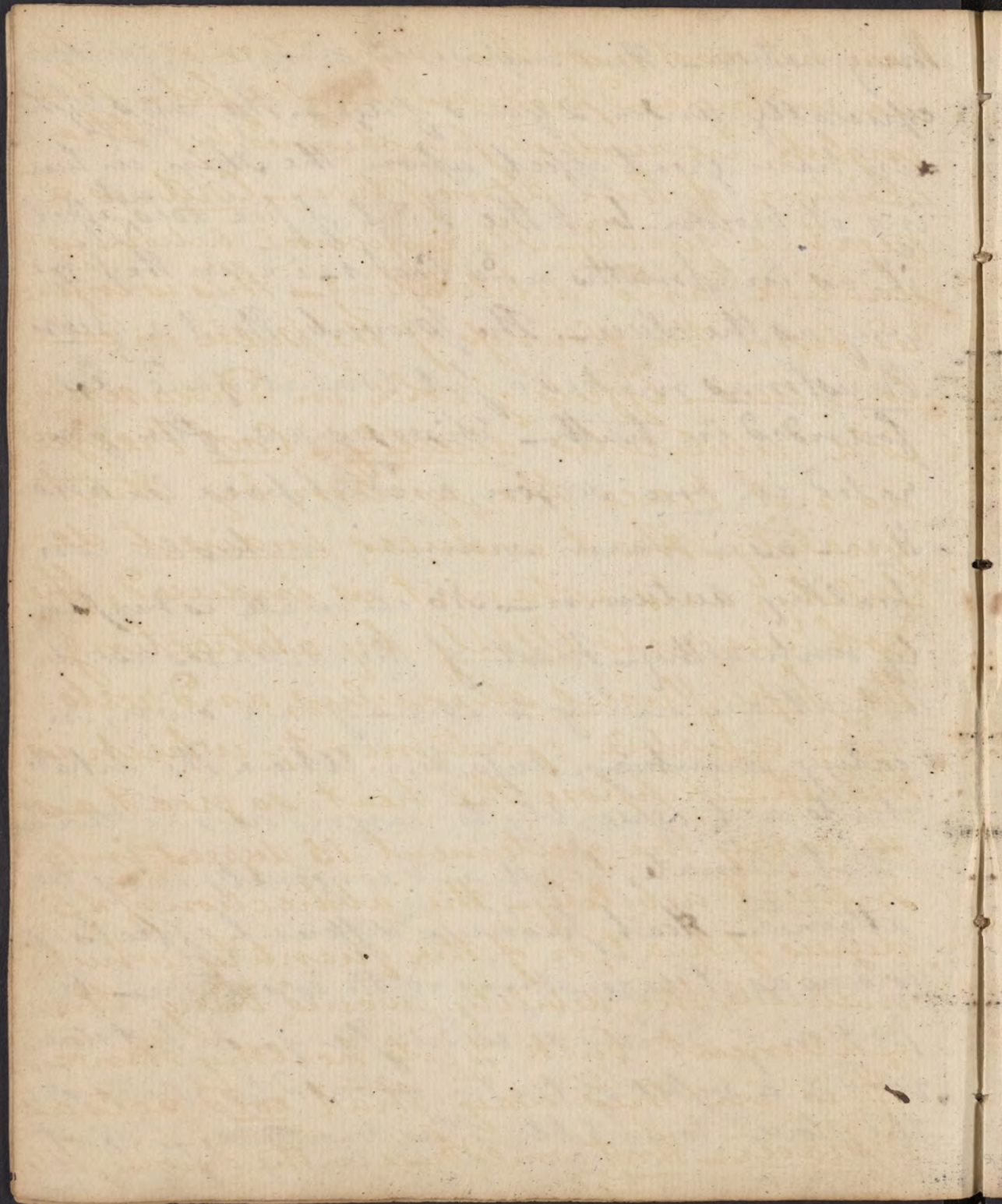
Decem. 22nd. Lecture 35th. - Storms are of different forms; but, like disease, they are all owing to convulsive action as their proximate cause. - Disease consists in morbid action. - Disorder is the effect of disease. - Remote and Predisposing causes of disease - Children are predisposed to disease by the ill customs of Mothers during pregnancy - and the bad management of Midwives during labor. - Washing children with spirits as soon as they are born is a bad practice. - They are often injured by improper food - by swaddling clothes, &c. - Colic is often brought on by Nurses taking acids. - Children are predisposed to disease by premature study - confinement in schoolhouses - and the tyranny of Tutors. - Many cases of Hydrocephalus are induced in children by blows on the head - falls, &c. - Influence of air. - Its sensible qualities are heat, moisture, cold, & dryness. - It is also impregnated with Miasma, Marsh & human, effluvia from plants, &c. - Heat & cold are relative terms; the extremes of either

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are not known - After 45 years of age, heat be-
comes more necessary to the human body -
All Animals require heat - In all constitutions
a certain degree of heat is necessary to equable
excitement - A greater degree induces Indirect
debility - a less degree, direct debility - Inso-
lation - A stroke of heat on the brain -
Heat, at first, increases appetite - & afterwards
induces Dysentery and Cholera - disposes the
skin to darkness - is less unfriendly to old than
to young people - excites the venereal ap-
petite early and supports it late - In-
flammatory complaints occur after a change
from cold to warm - Dr. R. has observed that
uniformly warm summers are the most
healthy - West-Indians can bear our climate
better than we can, for a while - it takes
them some time to cool - Our first parents
were placed in a warm climate - Heat
acts powerfully upon the eyes; hence Cata-
ract is more frequent in warm countries -
and ophthalmia, &c. - Heat impairs the
Mental faculties - but, perhaps, aids the

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Imagination. Heat disposes to disease in children especially under 2 years of age. The rays of the sun have great effect upon the skin in turning it brown - but the heat of fire does ^{not} affect it; as in Smiths and Cooks - i.e. in the same way as the Sun. The Proverb, that a green Christmas makes a fat Churchyard is founded in truth. Diseases are often generated in one season, and appear in another - as a warm summer makes an unhealthy autumn. No climate is necessarily unhealthy. Most of the diseases ascribed to heat are owing to errors of our own, in eating, drinking, dress, &c. - Where the Inhabitants act agreeably to reason, no matter in what climate, health and longevity may be attained. Heat produces different effects according as it is combined with moisture. A portion of moisture is necessary. In hot stove-rooms, a vessel of water should be placed on the stove to supply this moisture. Hot, dry seasons dispose more to violent diseases,



than hot moist ones? The evaporation from the
Sea, in England produces the sea-fet. The
English are rendered fair-skinned, by the
moisture of their atmosphere. - Cold - is a
negative quality. - Its universal action is
sedative, and debilitating - This is infer-
red from the slowness of the pulse in cold
countries. - Effects of cold in Diseases. &c.
Cold debilitates directly. - Cool breezes
do not brace the system by that
quality. - Heat induces indirect de-
bility; and when it is induced, the
cool air acts ONLY by abstracting
the superfluous stimulus, and resto-
ring equable excitement; - which is
Health. - Suppose the heat so great as
to carry the excitement 15 degrees into
Indirect debility - the abstraction of 15
degrees of heat, or of the quantity which
induced the debility, would bring the
excitement back to its healthy standard.
It is in this way that cold acts as
a bracer. - Heat would brace in the opposite state.

Chad

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Decem. 23rd. Lecture 36th. - Cold - produces

debility and excitability in the Arterial System - produces languor in the organs of Voluntary Motion - The stimulus of Aliment counteracts cold - much better than ardent Spirits - Cold weakens the Venereal Appetite - debilitates the Mental faculties - reduces both Plants and Animals - Causes old sores to bleed afresh - renders sweating difficult - Cold invigorates the Appetite; particularly for Animal food - It is not a stimulus; - it only allows other stimuli to act - it promotes Urine - is said to cause scurvy - but other causes must cooperate - Cold in a certain degree produces paleness - beyond that redness - and beyond that gangrene - It retards growth - checks perspiration - The stoppage of perspiration is caused by the debility, and consequent contraction of the extreme vessels, induced by cold - Much has been attributed to obstructed perspiration; but the solids are also affected by cold, and debility

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induced - People are most healthy in cold coun-
tries - but are subject to putrid fevers when
spring comes - owing to the permanent seda-
tive effects produced by the long cold wea-
ther, which prostrates the strength of the solids,
disabling them from reaction - Their fevers
run rapidly on to gangrene - Cold suc-
ceeding heat of short duration, produces
fevers, cholera, &c. - of long duration, scarcely
any effect - That succeeding cold of short
duration causes inflammatory fevers;
- of long duration produces fevers of a ^{gangrenous} typhus, or
the most acute inflammatory diseases,
are found in the Middle Latitudes - If
fervency has nearly vanished size of blood
from Britain - It exists in Pennsylvania
at present, like it did in Britain in the
time of Sydenham - Sudden changes of tem-
perature do not necessarily produce disease -
They may be rendered inoffensive by ac-
commodating the dress properly - Nay,
those changes are salutary in Great Britain.
Dr. R. never knew but one person who ^{suffered}

suffered from dressing too warm. In this case
it brought on a spitting of blood. - Sydenham
says nearly all his patients were sick from the
want of a suitable dress. - The Chinese dress ac-
cording to the weather. have several garments,
which they put on and off as occasion requires.
Cold acts more powerfully in sleep than wa-
king - when the stomach is empty than full -
- It acts powerfully on old people - they suffer most
with cold - drunkards also. Children bear cold
well. - ^{one woman} Indian Women have ^{was} been found dead from
cold with ^{child} living children at their ^{her} backs. - Some
people are very sensible of the qualities of the
atmosphere. - An old man ⁱⁿ Philadelphia could
predict the changes of weather by a ^{sickness} ~~person~~ in
his stomach. - Ducks straighten themselves
up and clap their wings before change of
weather. - The cold hand of a physician often
induces rigors over a patient. - A Lady took
cold from leaving off a ribbon from her ^{cap} ~~neck~~
~~which~~ which she had been accustomed to
wear. - In chronic diseases we should ad-
vise to keep the feet warm - in all nearly? -

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For by the Fleet & Mouth, says Dr. R. I believe we receive nine tenths of all our diseases. From a record kept by Dr. ^{a Frenchman} ~~R.~~ it appeared that the most people died in January from which time there was a gradual decrease until the month of August - but it is not common for the most deaths to occur in January. Old people, in these states, are most healthy in June and July. Physicians may generally leave home with least disadvantage in the month of June. June is a solstice, where diseases make a pause - but it is only to change one set of destroying weapons for another. Colds are most frequently caught in the night. Yellow fever in Philadelphia most frequently attacked in the night. Heavy and long rains will chase away yellow fever without frost, if no warm weather succeed. Marsh Miasmata. Heat and moisture combined are essential to the production of these; for either alone is insufficient. These Miasmata are a copious source of disease. The importers of yellow fever ask

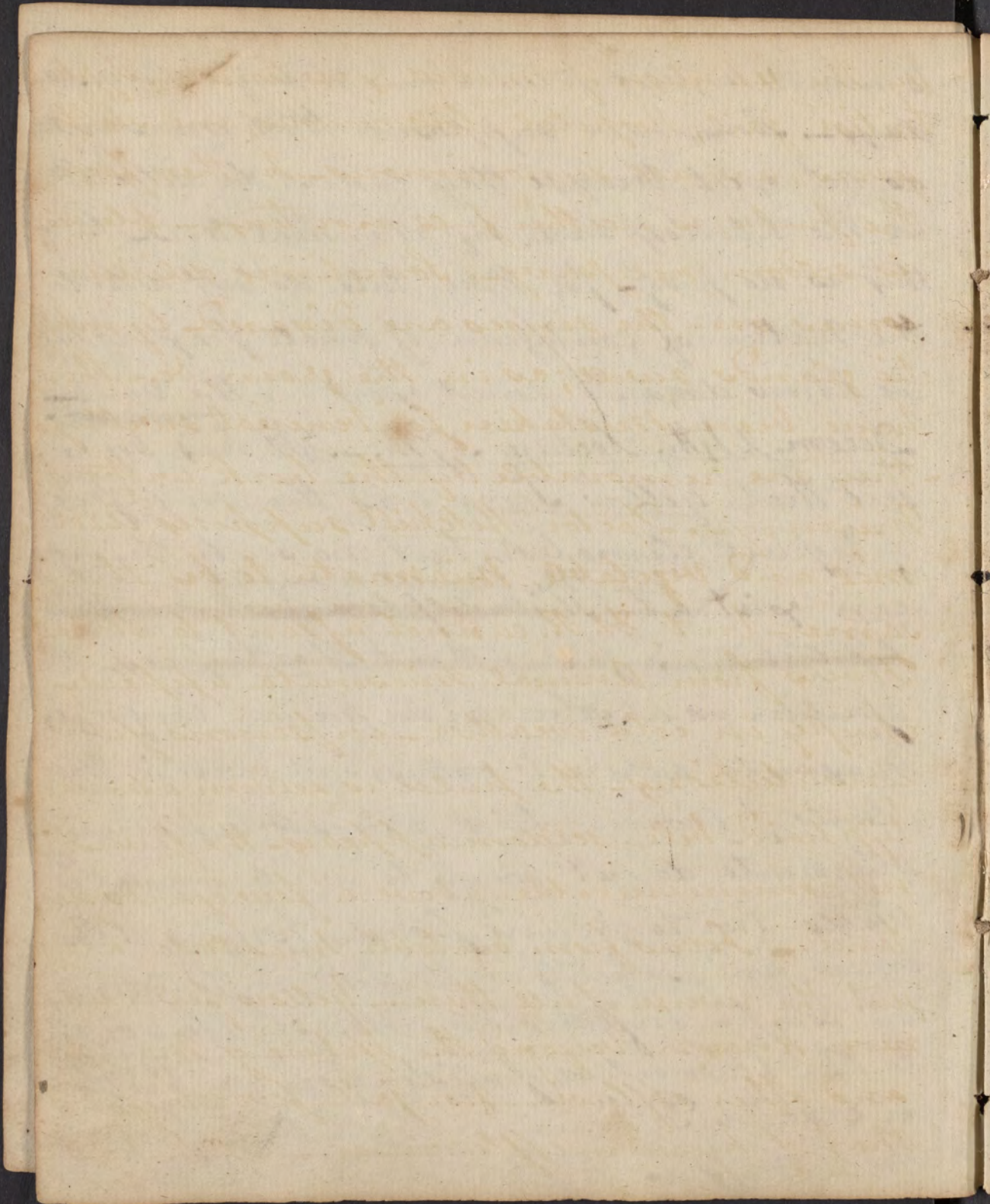
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why we have not yellow fever every year? Why
have not we the same quantity of grain &
fruits every year? - These are influenced by
the seasons; and Why not Fevers? The pellicle
on ponds prevents exhalation and consequent-
ly disease - but a rain which breaks the pellicle
will suffer exhalation and disease to follow.
Pavements render the earth impervious
to filth - and thereby do injury - Streets ought not
to be paved so closely - Exhalations from cab-
bage, and a variety of vegetable and animal
substances, induce fevers - They act 1st. upon
the stomach, inducing black vomit, and inflam-
-mation of the stomach - 2nd. Upon the Liver
3rd. The strength is prostrated - 4th. they act
upon the bloodvessels - 5th. upon some of
the viscera; as the Brain, kidneys, &c. - 6th.
Upon the nerves and Muscles - 7th. upon the
glands - 8th. Upon the skin; inducing e-
-ruptions - and 9th. Upon the Eyes; inducing
ophthalmia, &c. - How long Miasmata may
lay in the body without inducing disease

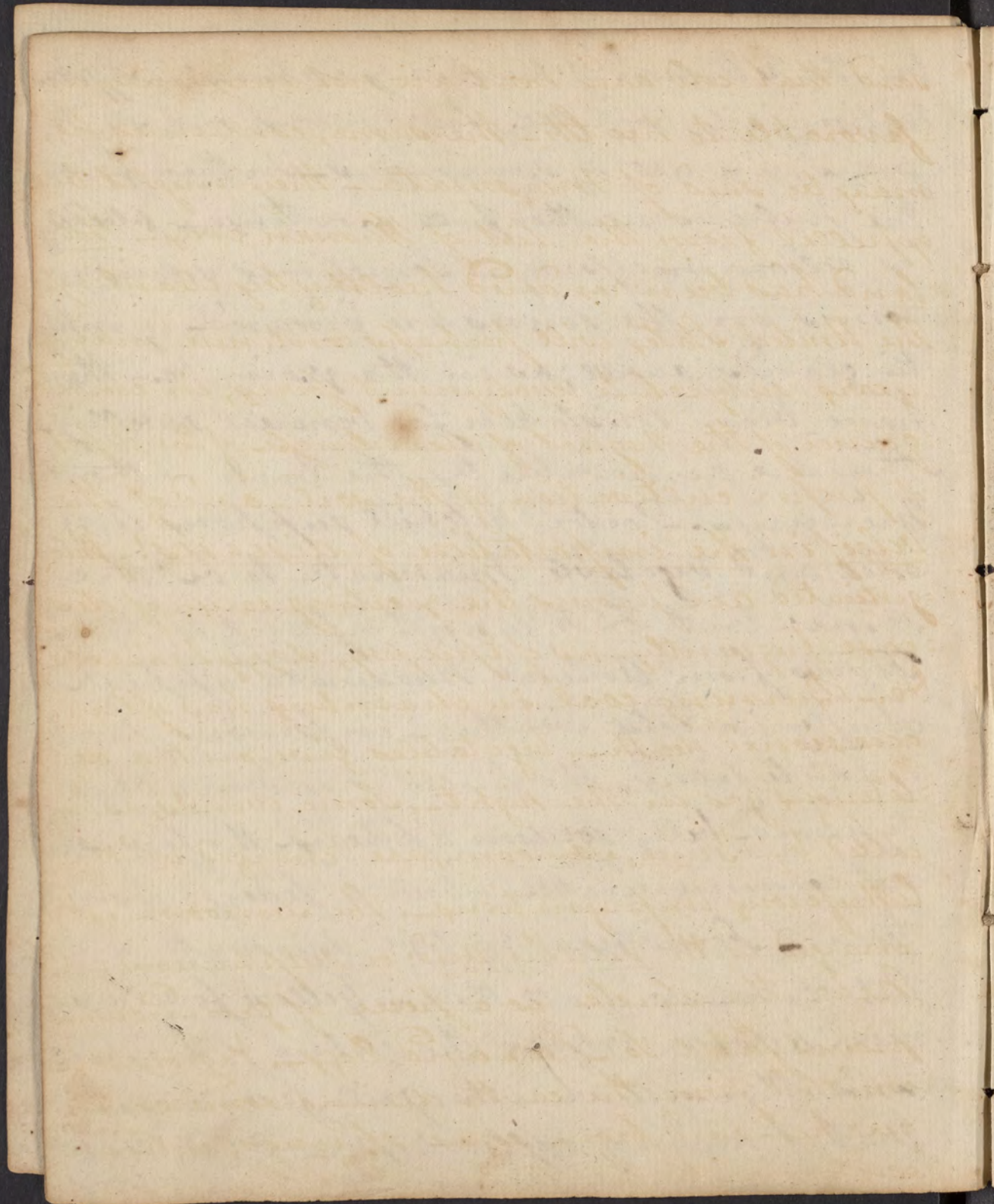
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is uncertain; but it may much longer than 30 days. Some have supposed that Miasmata do not exist, because they cannot be detected in the Atmosphere by chemical tests - but this is no proof - for those tests do not detect the matter of contagion of small pox - which we know does and must exist in the air? -

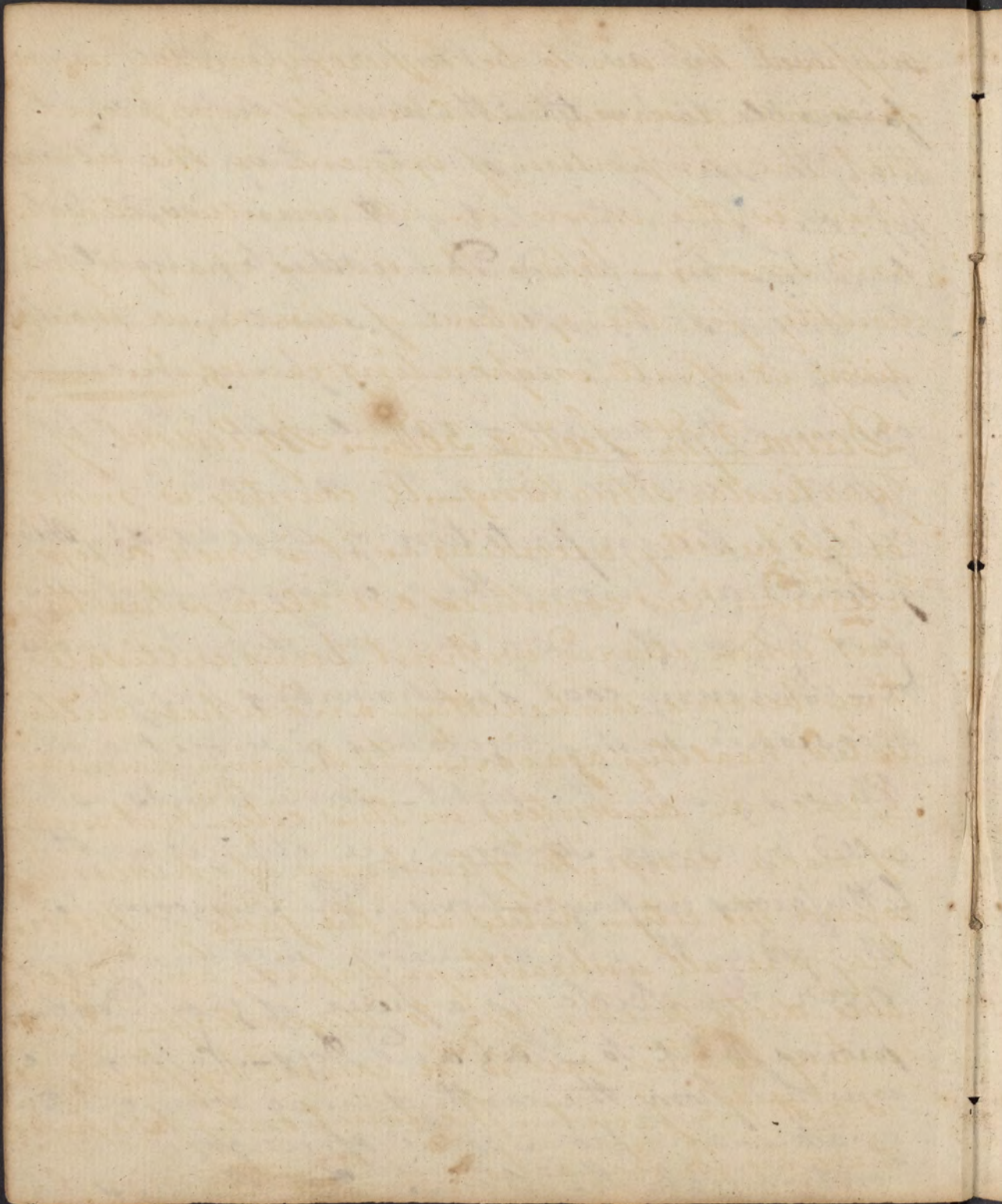
Decem. 24th. Lecture 37th. - It has been said that Yellow Fever was the ship-fever of tropical climates - but no such thing can exist ^{in the tropical climates} ~~at Philadelphia, because this~~ ~~city is far without the tropics~~. The assertion is a solecism in Medical language. Miasmata adhere to clothes, and even to the walls of wooden, brick, and stone houses. Miasmata do not adhere to white-washed walls - nor to ground floors. - Pregnant women, and patients with local inflammation escape infection by Miasmata - owing to the stimulus of distention in the former case, and pain in the latter. Canine Madness is produced in rabid animals,



by the retention of morbid excretions?—Typhus
Frition, jail, hospital, low nervous, and ship
fevers, are all synonymous—In these fevers
the pulse is neither full nor tense—bleeding
is seldom necessary—Sometimes delirium
comes on—the senses are diseased—lymphatic
glands swell; as in the groin, &c.—these
have been mistaken for venereal swellings
—they are removable by the bark without
Mercury—Doctor Mitchill supposes Ani-
mal and vegetable Miasmata to be the
same—but Dr. R. cannot assent to this—
Fever from Animal Miasmata appear
chiefly in cold weather—in persons of weak
constitutions—the pulse is seldom above
typhoid—bile seldom appears—the fevers are
not communicable above a few yards dis-
tance—Fever from vegetable Miasmata are
just the reverse of all these—Yellow fever was
never known beyond the sphere of marsh
and other effluvia—nor jail fever beyond
that of human effluvia—Dr. R. has
said

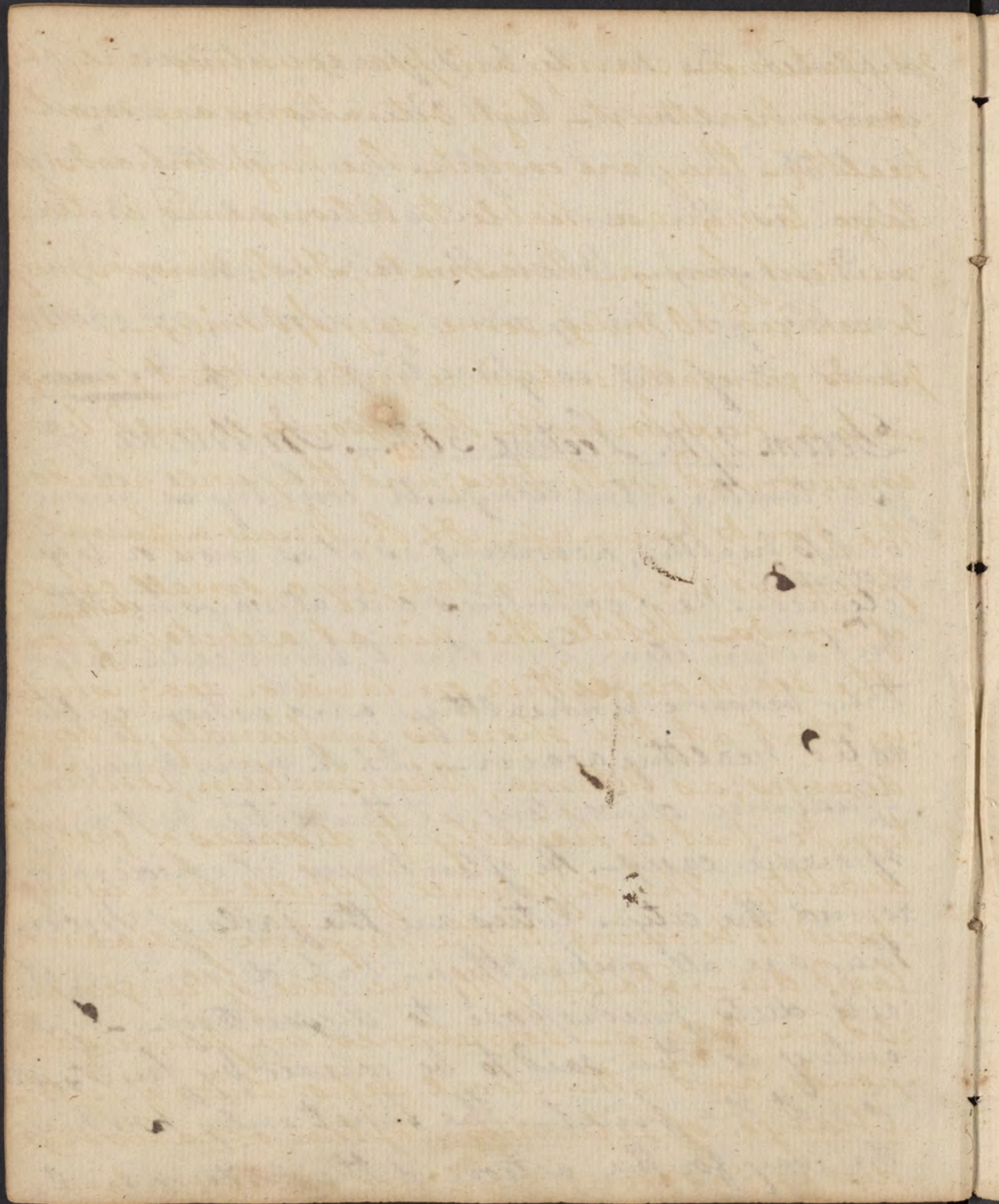


said that cold and heat are not necessarily un-
favorable to health - the same, continues he,
may be said of miasmata - they might be
expelled from the list of human evils! - Hol-
land has been rendered healthy by cleanliness.
The United States will perhaps continue many
years subject to malignant fevers, in conse-
quence of the neglect of cleanliness - of the defect
of proper cultivation of the soil - and of the
belief in the importation of diseases! - Phlo-
gisticated air proves the exciting cause of dis-
ease frequently - as of Epilepsy, dizzy headache,
&c. - Burning coal in chambers has often
occasioned death. - vegetables give out a de-
leterious gas in the night. - Some winds, as that
called by Bruce, Simoom, are charged with
lethiferous impregnations. - The Simoom is
charged with vitriolic acid; or sulphureous gas.
Near the Sciota is a piece of ground which
proves fatal to Deer and Dogs. - vapors are
emitted from the earth during some earth-
quakes - and from some springs, which
contaminate the air. - Dr. R. once sup-

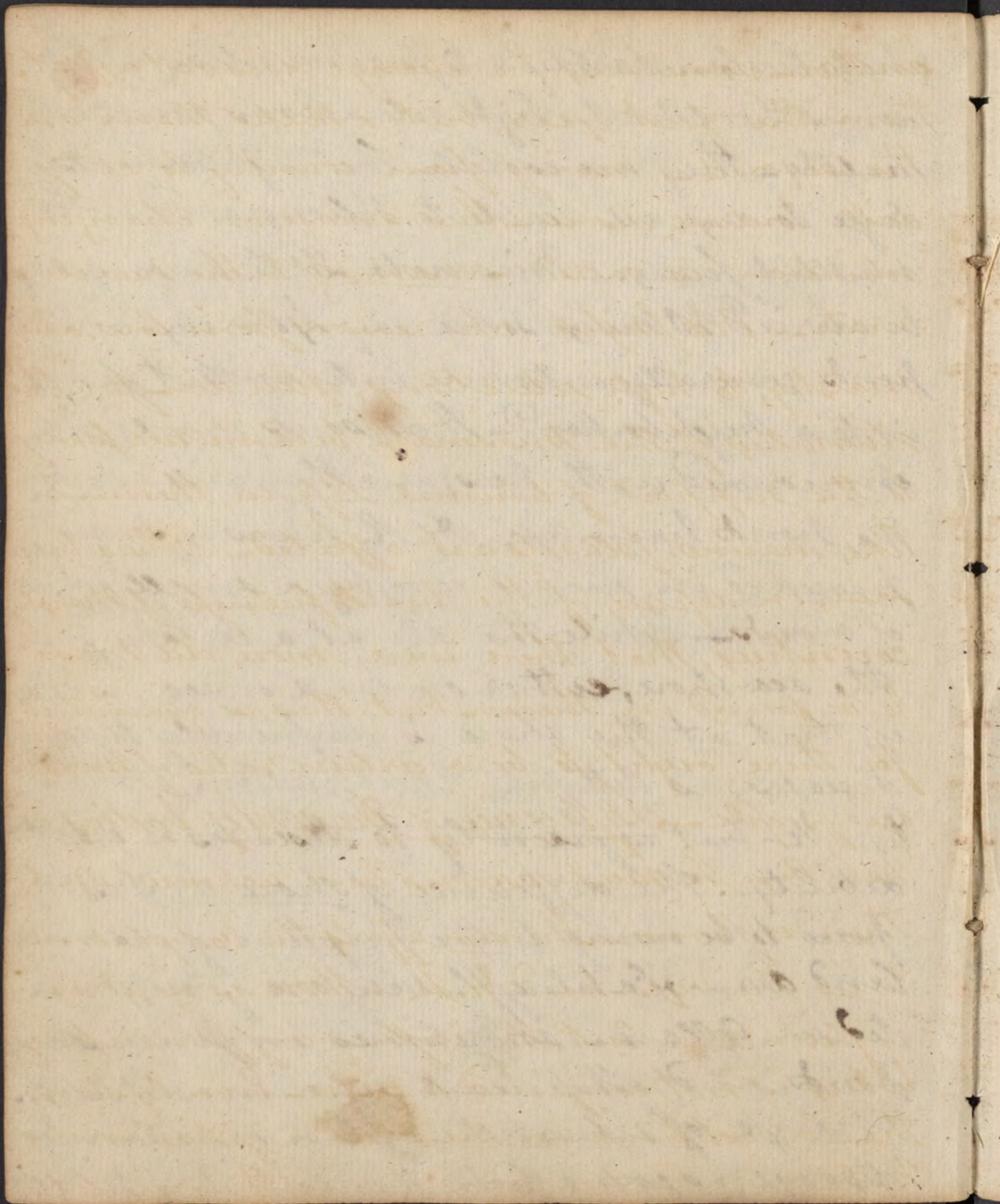


supposed the air to be hyperoxygenated during epidemic diseases; but Chemists have proved that the proportion of oxygen in the atmosphere is the same in all countries, climates, and seasons. When the air is changed favorably for the existence of disease, we should divest it of all co-operating causes. &c.

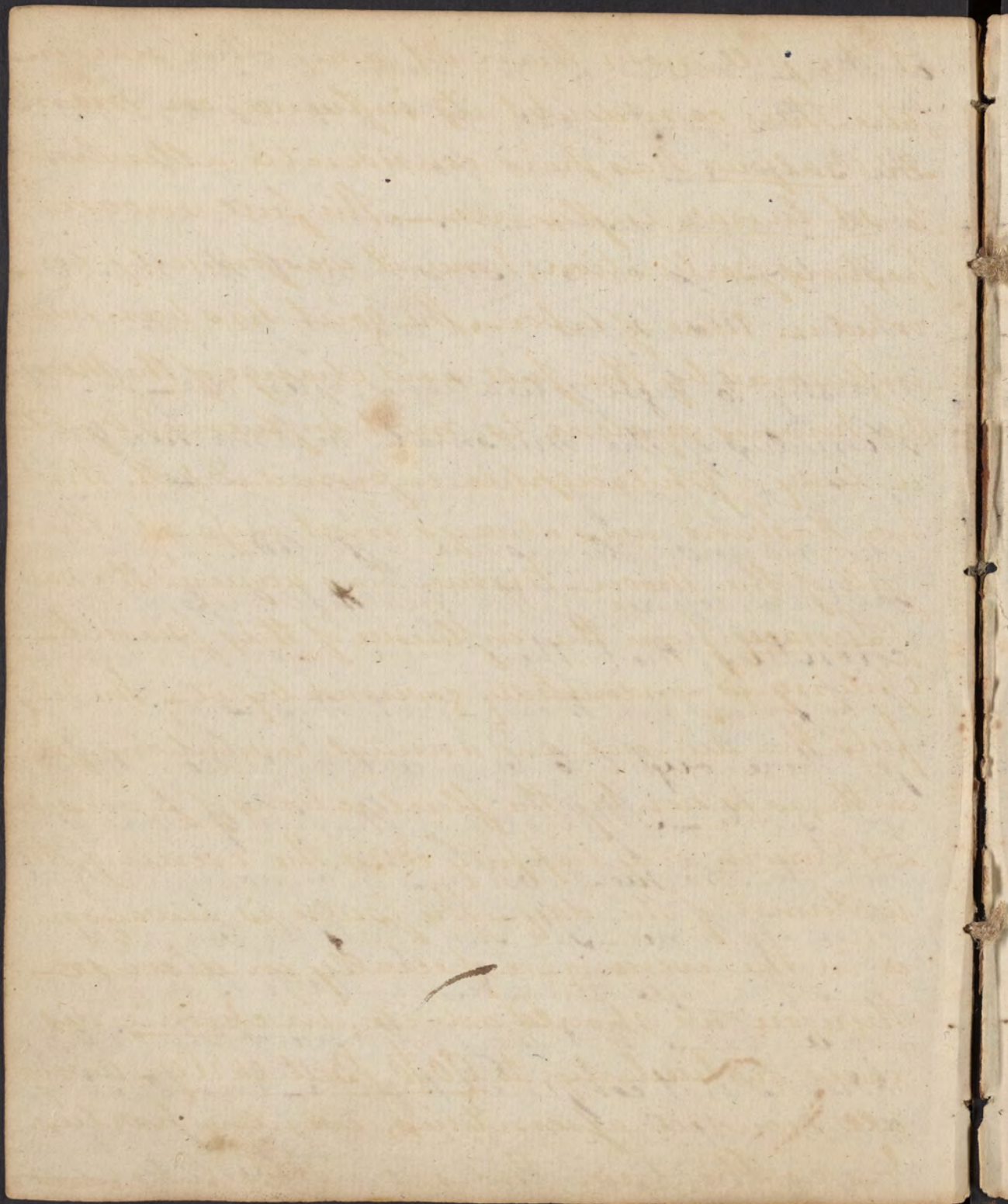
Decem. 27th. Lecture 38th. Influence of Particular situations. A country is more or less healthy, according as it is more or less cleared, ^{or cultivated}. New countries are always healthy, but when cleared without being cultivated, they become unhealthy, and when cultivated, healthy again. Dr. R. never knew an epidemic dysentery in this city, but many sporadic cases. He often knew it epidemic round the city. Cities are the jails of men. They are all unhealthy. Vapid, and vegetable diets predispose to dysentery. Dysentery is often said to be caused by fruits, it is not the fruit. The fruit only prepares the way for the action of the autumnal



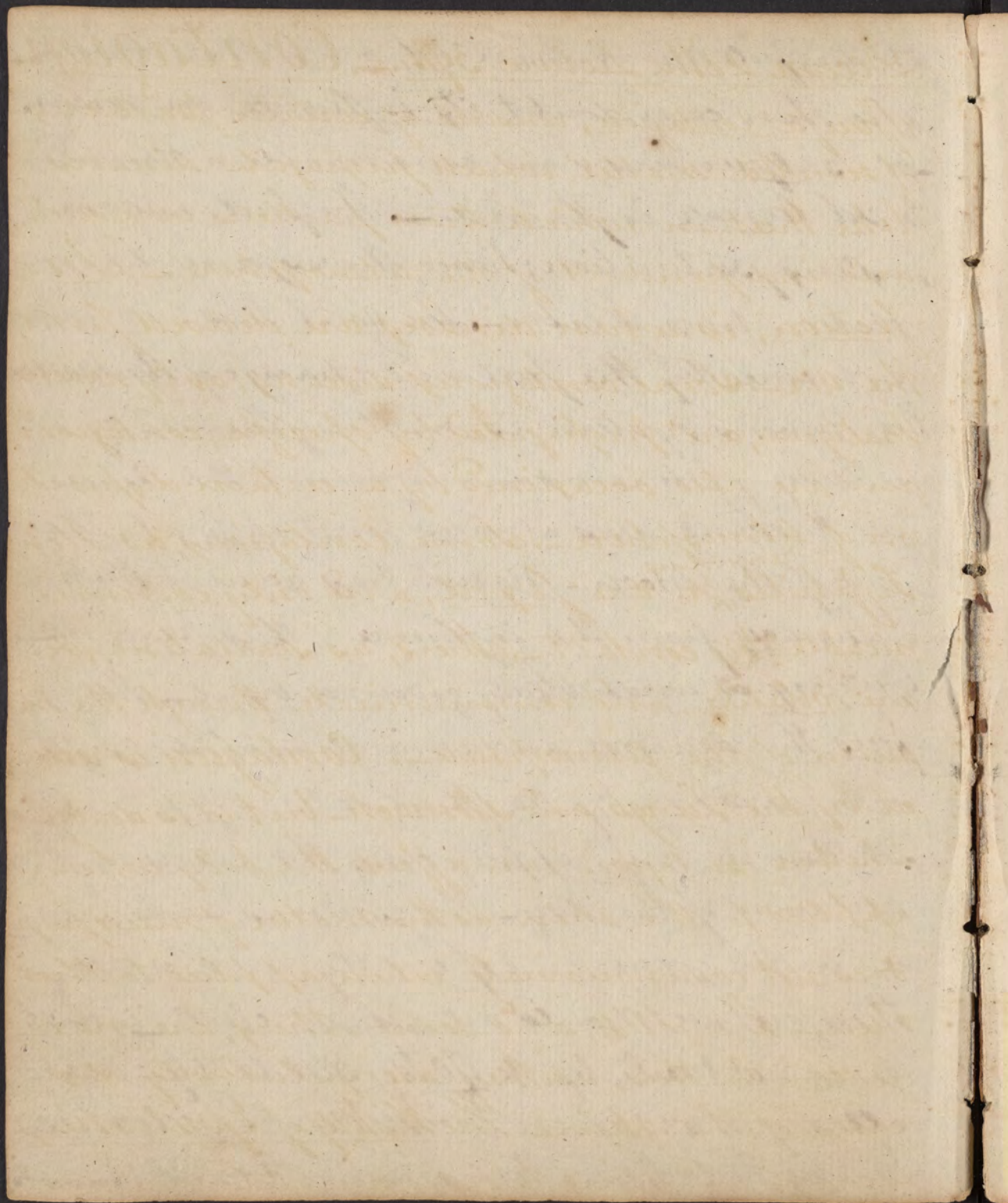
exhalations-. Sandy and poor countries are al-
ways healthiest- high situations are most
healthy- they are coolest-. The neighborhoods of
large towns are liable to bilious and inter-
mittent fevers-. Miasmata, Dr. R. knows, may
be carried 10 miles- some say 40 miles-. Mill-
ponds generally introduce intermittent fevers
into a neighborhood- Those ponds should be
environned with trees; and they will render
the ponds harmless-. Dr. R. knew a family
preserved in such a case, by a small copse
of woods-. While the air at a certain ^{distance} from
the sea-shore, either on land or sea, is health-
y, that at the shore is unfriendly to some
diseases; as Asthma, Rheumatism, Consump-
tion, &c- but is friendly to diseases of great
debility-. The difference of shore-air is sup-
posed to be owing to the mixture of sea and
land air-. Fatal effluvia are often genera-
ted in cellars- sometimes in privies, dunks,
ponds, and other local repositories of filth.
Change of situation often occasions
disease; as going from one country to a-



another. Sometimes the change does not affect them the first year, but attacks them on the second. Moving from country to city will induce disease. This disease on changing situation is called seasoning to the new climate. Old people who remove from low, and marshy, to high situations, often die - for the stimulus of the miasmata became necessary to the support of animal life in them. In like manner plants are affected. It has been said, in defence of the healthfulness of marshy countries, that there were more old men to be found in them - but this is against it, for there ought to be a certain ratio of middle aged people. Influence of Heavenly bodies on health. The nicest observers have acknowledged their influence. The sun affects the body - sometimes the eyes - head &c. The Moon is next in influence. But the influence of planetary bodies is not confined to man. Even oysters, the lowest link in the chain of animated nature, are affected by them - they are fatter



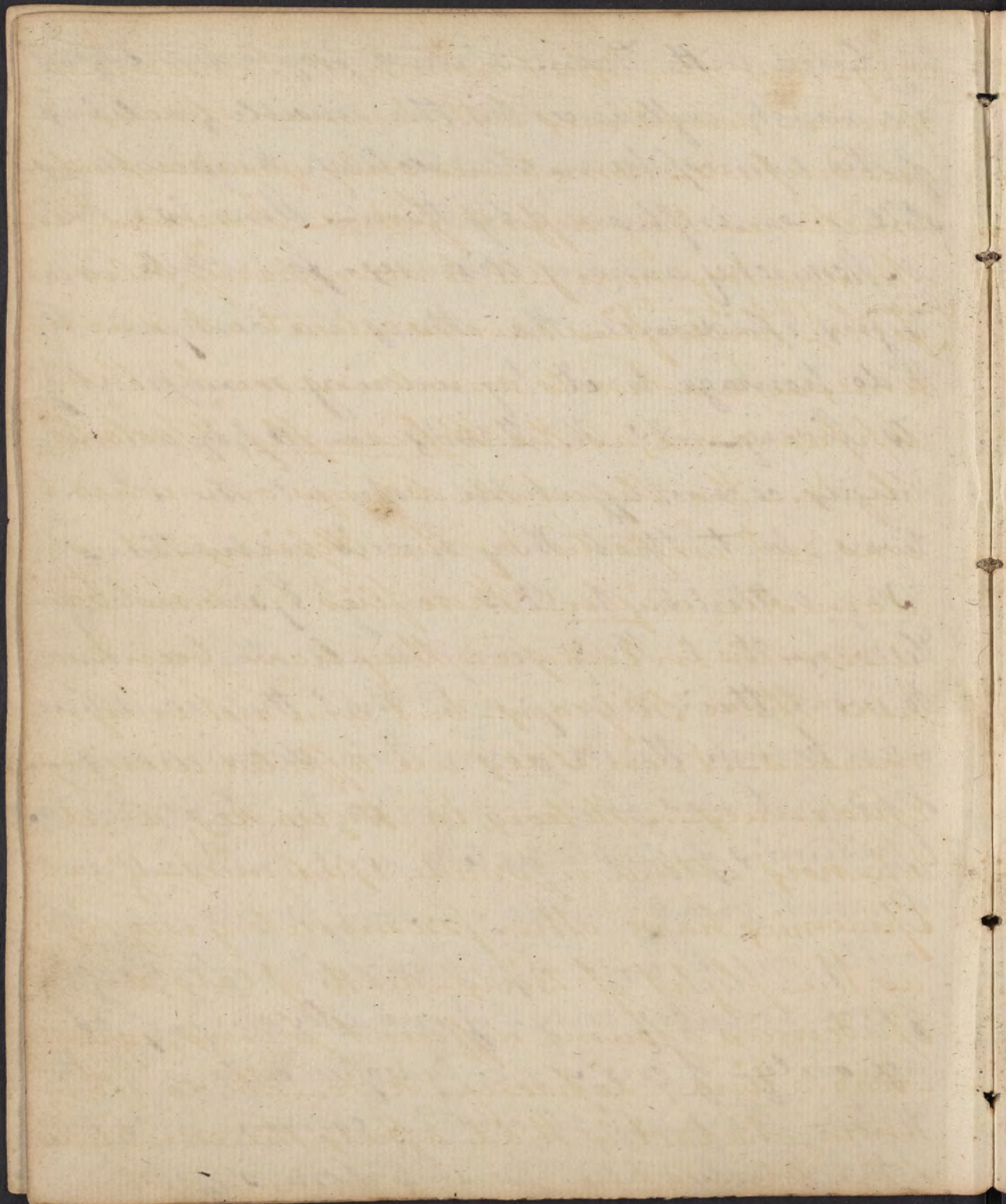
at the full moon than at any other season.
Who then can doubt its influence on man?
Dr. Balfour has paid considerable attention
to sol-lunar influence. The full moon
hastens parturition; hence it was formerly in-
voked in time of labor. The gout has been much
influenced by the full and change of the moon.
The nervous system is most influenced by it.
A Lady of Philadelphia informed Dr. R. that
her Husband was always most cross at the
full of the moon!- Mania has acquired the name
of Lunacy from the influence of this planet.
Epilepsy is undoubtedly governed by it. The body
feels the diurnal and annual revolutions of our
earth; as is seen by the fluctuations of fevers, &c.
Dr. Darwin very happily calls the evening, the
autumn of the day. The pulse is always quick-
er in the evening- especially in disease-
therefore we should advise, in chronic dis-
eases particularly, to Go to Bed early- avoid
all crowded assemblies, evening parties,
&c. as Theatres, Balls, and the like.



Decem. 28th. Lecture 39th. Contagion.

Specific contagion, consists of certain particles of secreted matter which propagate diseases like that in which those particles were secreted, and independent of the atmosphere. — Infection, is when diseases are derived from the air. — Some contagious diseases, as Cynanche Maligna, are propagated by specific contagion; and are also occasioned by a certain disposition of atmosphere. — Some Contagions, as Itch, Syphilis, ^{ringworms} &c. are fixed, and only communicable by contact. — Others, as Scarlatina, &c. are volatile, and communicate through the medium of the atmosphere. — Contagion is received by the Lungs and Stomach — but it is doubtful whether contagion can affect the body when applied to the skin — as the matter of small pox does not communicate when applied to the skin. — The Itch, and some others, are no objection to this, as they are exclusively diseases of the skin. — The History of Epidemics is very interesting to us; as our Cities are much

afflicted with them. - Small-pox and Meazles
are much influenced by the sensible qualities
of the atmosphere. - Scarlatina anginosa is
still more influenced by them. - There is a kind
of Monarchy among diseases - for while one
reigns epidemic the others are compelled
to do homage to it by wearing some part of
its Livery. - Dr. R. thinks small-pox and
Meazles cannot affect the body at the same
time; but that they succeed each other. &c.
Pay attention to this law of Epidemics, Gen.
Hemen, - that they compel all other diseases
to wear their livery; and that they sometimes
even banish them from their dominions. -
This fact was first mentioned by Sydenham.
Epidemics of feeble nature will, ^{sometimes} banish diseases
of much greater violence. - Some people never take
contagious diseases. - Epidemics often affect persons
of one country only - of one color only - of one
age only - of one sex only - of a certain rank
only - They affect certain communities only
- one family only - persons of one profession only.



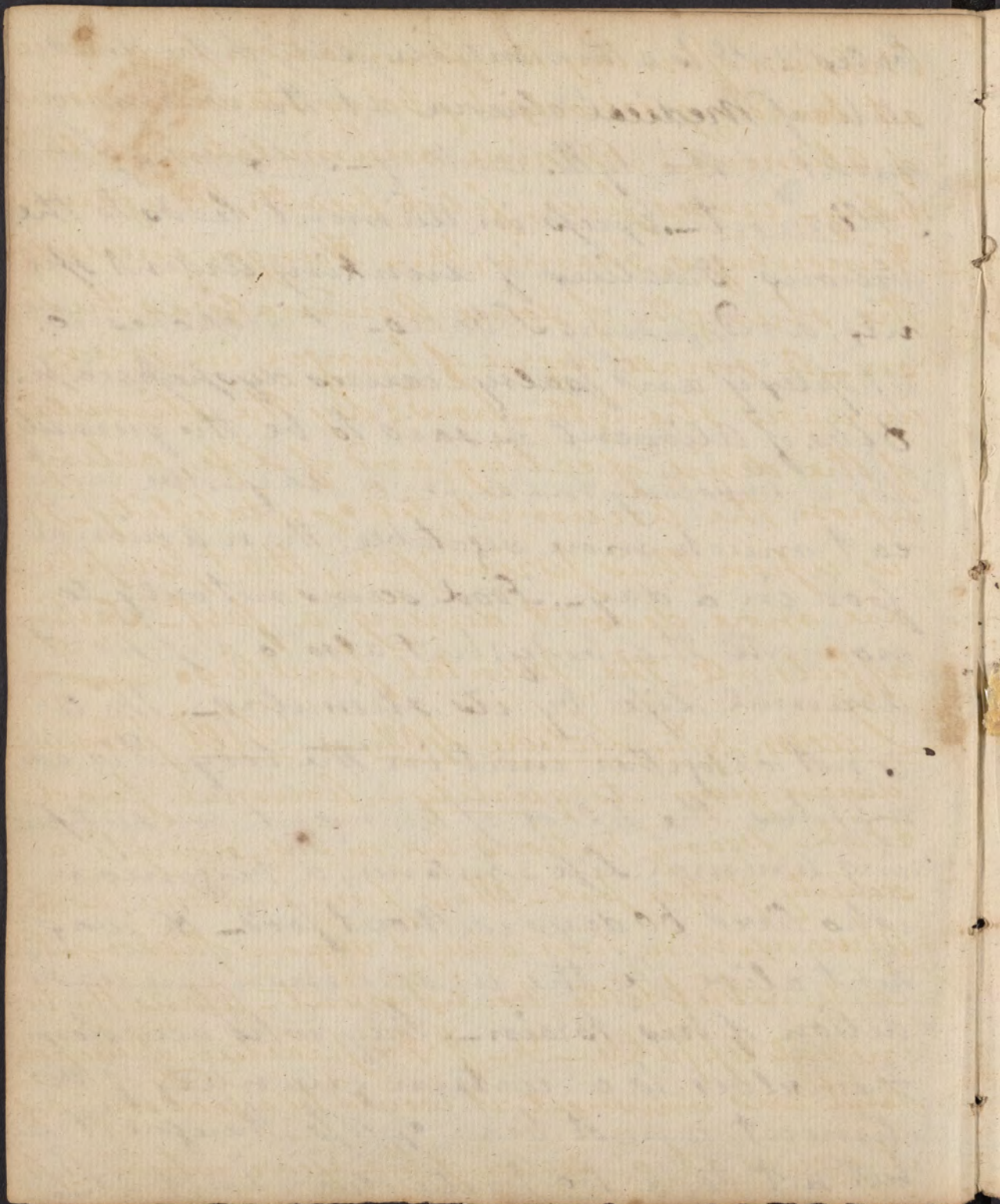
only - they often affect none but the human species - sometimes both human species & quadrupeds - sometimes only quadrupeds - sometimes they affect fishes - Insects - &c. - Mosquitoes never fail to accompany ^{the} bilious Epidemics ^{of this country} - house-flies always retreat at such times - New Insects sometimes make their appearance; as the Hessian fly, & potato-fly, &c. - The fly which destroys our wheat was not imported by the Hessians - it is of domestic origin! - These flies have not been discovered in Europe - they have been known here these 50 years - but were not very numerous - Even Trees are affected during Epidemics - Meteors, Earthquakes, and Volcanoes attend or precede Epidemics - Great Epidemics have other premonitory signs; as the flight of Birds - death of cats, dogs, &c. Epidemics assume different forms; as Plague, - scarlatina, - Leprosy, - &c. &c. - We do not know what it is that affects the constitution of the atmosphere so as to produce Epidemics,

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It may be Electrical matter - Epidemics run partially - so do hail and rain storms; - The pulse is quickened during the prevalence of Epidemics - Some diseases of weak action were removed during the prevalence of the yellow-fever; and healthy people had continual headaches, languor, &c. - It quickened the pulse universally; therefore must have been derived from the atmosphere. Dr. R. has given Bark by the pound without unsheathing the lancet in autumnal fevers, and vice versa - The time will come, when we shall lay by the lancet and use tonic medicines - You must not then, says Dr. R. censure my encomiums on the Lancet; for diseases change. Epidemics were once supposed to be sent from Heaven - Then from some of the Planets - then from the eastern world; particularly from Egypt and Siam - Even at the present day, many suppose them to be derived from foreign places!! And carried in ships & ^{bales}

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baled!!! It is a lamentable proof of the low
state of Medical Science at the commence-
ment of the 19th. century. Diseases from
Aliment. Excess in Aliment leads to the
vicious practices of drinking Ardent spi-
rits, and using Tobacco. it disposes to
Apoplexy and Palsy - causes dyspepsia, &c.
8 lbs. of Aliment is said to be the quantity
for a labouring man in a day. We can
eat much more vegetable than Animal
food in a day. Food seems not only to
nourish the body; but also to support
Animal Life by its stimulus. Water
is not altogether inert in the body. Disease
supplies the place of Aliment in support-
ing Animal Life - Instance, a virginian
who lived 60 days without food. He was
kept alive by the uncommon encreased
action of his Brain. They who accustom
themselves to a certain quantity of A-
liment, cannot bear excess. Therefore it is
best not to be too particular about it. - c.

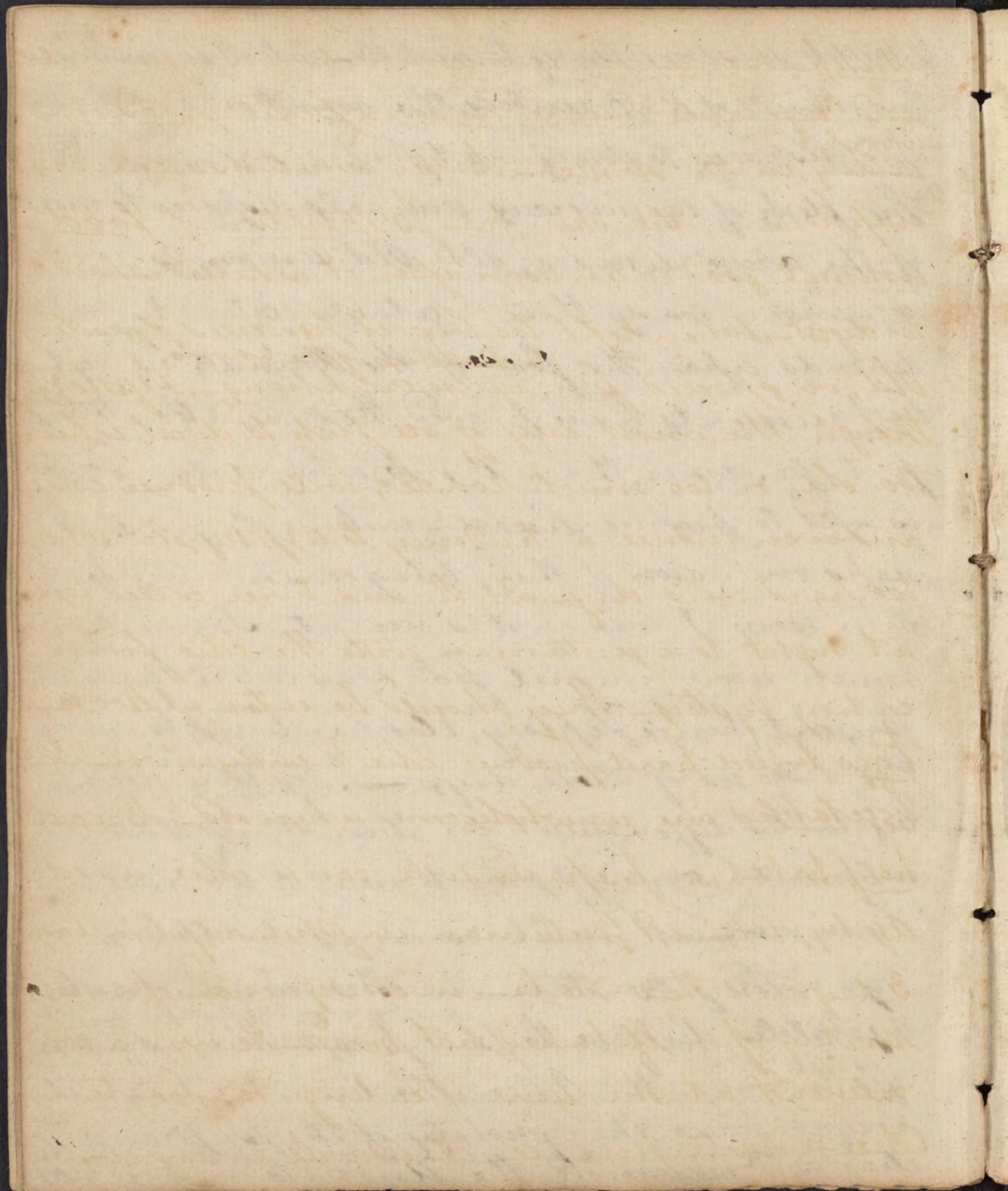


Children often lay the foundation for disease at boarding schools, by being stowed in point of Aliment-. Famine accumulates excitability- causes fever, fetid breath, &c. afterwards Hemorrhages, Mania, &c. - Hunger increases the strength of some Animals; as the Lion- on-. A small degree of hunger in men increases strength- how? By the stimulus of the desire of eating, and of Life, acting upon the accumulated excitability- It is upon this principle, that people are more devout during a fast-. Fasting affects all the Mental faculties.

Decem. 29th. Lecture 40th. - Diet produces disease from its quality-. Animal food- Fish- Many Nations live on Fish, owing to a scarcity of other food- Others from indolence; as the Africans- Some from absurd religious opinions- Fish contains but little nourishment- lessens the venereal Appetite- &c. - If the practice of keeping Lent was universal it would be a good one, as it occurs at a season of the year when less
stimulus

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stimulus is necessary to health. At other seasons
this kind of diet renders the countenance pale
and disposes to malignant fevers, Leprosy, &c.—
The flesh of carnivorous animals disposes to most
of the above diseases; also Old animals, in con-
sequence of losing their vegetable nature!—Much
depends upon the food of the animals we eat.
Experiments have proved that mutton & beef
putrify sooner than lamb and veal. Pork
is apt to produce disease—instance the jews. Per-
haps one reason of their being commanded to ab-
stain from it was on this account. Formerly,
much more animal food was eaten than at
present; hence ^{Plague,} Leprosy, Elephantiasis, &c. were
the diseases of those days—Vegetable diet—
Vegetables differ much in their degrees of nou-
rishment—some approach near to animal food.
Their nourishment is in proportion to the
sugar they contain. Acids corrode the teeth, &c.
Vegetables dispose to ^{dropsy, & anasarca,} palsy, dysentery, dyspepsia,
flatulency, &c.—lessen the venereal appetite.
They subdue the ferocity of the passions—
clear and invigorate the understanding? &c.

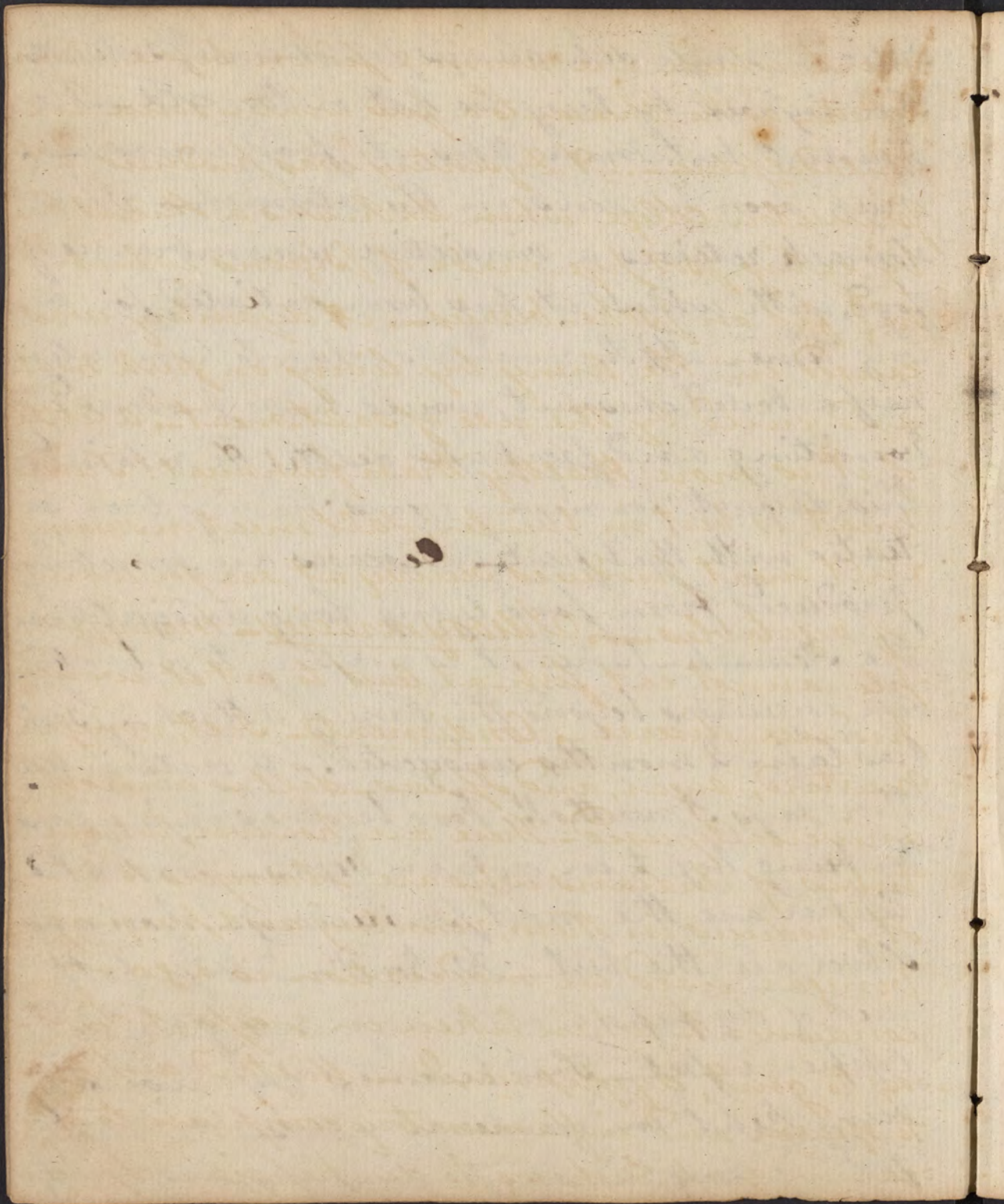


Milk, which is an Aliment between Animal and Vegetable Nature, in some people produces sickness, & acidity in the stomach. Butter sometimes causes eruptions on the skin, &c. - Preparation of food - Animal food eaten soon after it is killed is harder to digest. When kept too long it produces dysentery. Old, or spoiled fish, ^{& disorders of the bowels.} cause eruptions. Oysters, though the most easy of all flesh to digest, when too old, or too much roasted, will produce colic; and even induce a tendency to Asphyxia when too hard and dry. Dr. R. was twice called up at night to a gentleman with the colic from eating oysters. They should be eaten at noon. Eggs boiled hard produce colic & indigestion. &c. Vegetables are unwholesome when old. Bread half-baked, or prepared will cause colic and Asphyxia. A Gentleman in Philadelphia, lay 3 days in this state in consequence of eating heartily of half-baked, hot bread. He was a convalescent at the time of eating it. Toasted Cheese will produce it - as will eating with-
out

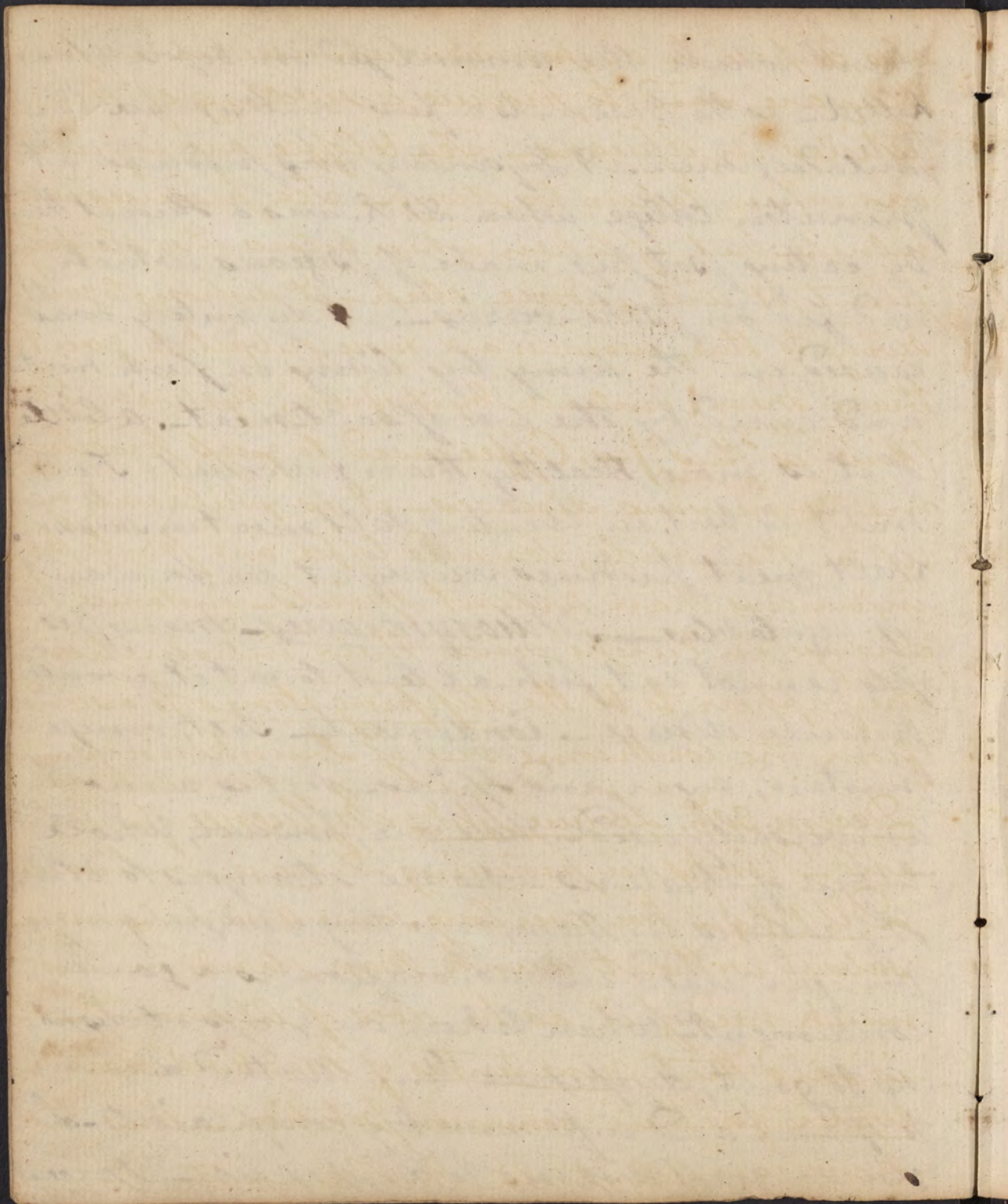
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out mastication, - called bolting - . Eating in a hurry, at long intervals, &c. - Some suppose vegetables to be the only proper & natural diet for man; and that man will cease to labor - If this were the case, vegetables might support him, but not otherwise - "Man is the most omnivorous of all Animals -". Large quantities of food after fasting is very injurious - it sometimes induces sudden death - instance, Otway the poet, who died just after eating half a loaf bread, which he had procured with money given him out of charity - . In all chronic cases 4 or 5 meals a day should be ordered. The debilitating effects of vegetable diet constitute its good properties in small-pox, and some other diseases - . Changes after long confinement to one kind of diet sometimes have bad effects - . Fainting has been induced by the sight of animal food after a long abstinence from it - instance, Bruce in the desert of Nubia - . Disease is caused by the improper mixture of aliment - This is a fruitful source of disease.

Order a single dish always for chronic patients. Food injured by being too hot or too cold. No Animal but Man takes its food warm. Milk soon hardens in the stomach. The stomach retains a vindictive remembrance of food, with which it has been satiated, for a long time. Dr. R. remembers when to have eaten half a boiled chestnut, would have produced vomiting and perhaps death! He retained this disgust for many years; having been satiated with that fruit. Diseases are sometimes produced from food lying long undigested in the stomach - hence it is necessary to go back in our inquiries beyond the time of attack. Pork has lain 2 months undigested? - A certain Author says 5 months!! - Food becomes injurious by being kept in certain vessels. Lead and Copper are the most pernicious. Iron and Silver are the best. Dr. Bond and Wife both died of dyspepsia in consequence of using a copper vessel. Food becomes injurious by being kept in unclean vessels. Animal food is sometimes injurious from the ali-



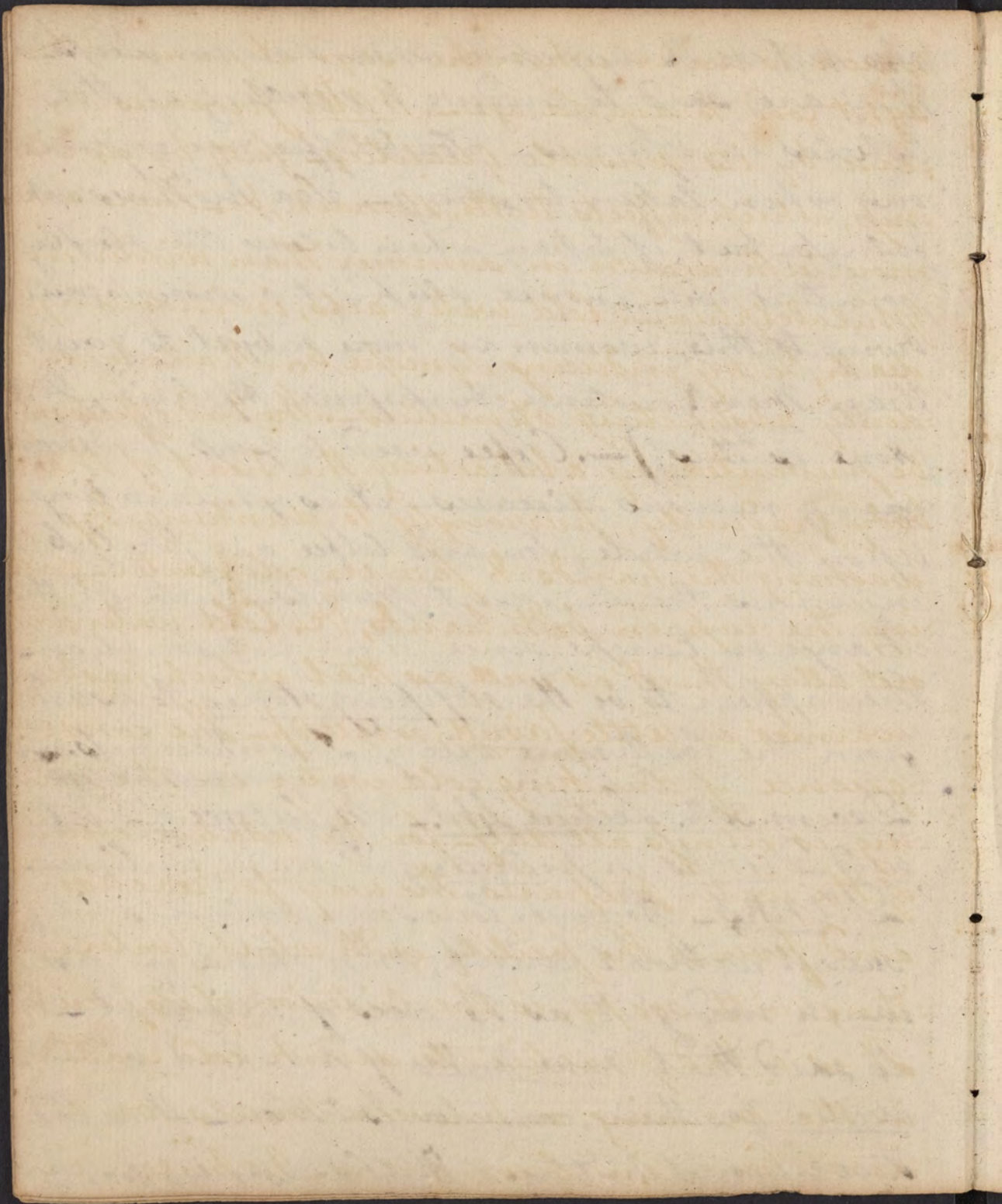
ment which the animal fed on before it was killed - as the Pheasants a few winters since in Philadelphia - A Dysentery was produced at Princeton College when Dr. R. was a student there, by eating Pot-pye made of Pigeons which had fed on Poke-berries - A dysentery was caused in the Army by living on fresh meat and cured by the use of salt-meat - a little of it is more healthy than fresh meat? Fresh meat is best in winter; salt meat in summer. Salt meat produces scurvy at sea for want of vegetables - Idiosyncracies - Many people cannot eat fish - at least to eat it, would produce disease - Condiments - Salt, vinegar, Mustard, sugar, and Spices - Salt is almost universally used - There are, however, whole tribes of Indians who are strangers to it - It produces in them, vomiting and purging - vinegar used in moderation is a good condiment - when taken in excess it disposes to gout, dyspepsia, &c. - Mustard disposes to spasm and inflammatory complaints - Sugar in excess disposes to dyspepsia - Spices ^{also}



also dispose to dyspepsia when used in excess. They are said to produce a swelling of the testicles in Africans. Tea & Coffee are injurious when taken too strong. Tea produces wakefulness - but if taken when below the sleeping point, it will induce sleep - it disposes to gout & owing to this, women are more subject to gout than men. instance, Dyspepsia, Hysteria, &c. (How ^{all right} is this?) - Coffee used to excess produces many nervous diseases - it is exhilarating. Upon the whole, Tea and Coffee are far less injurious than ardent spirits - instance, the change in Europe since their introduction. They appear to be the stepping-stones to ascend from the loathsome vice of Drunkenness.

Decem. 30th. Lecture 4th. - Influence of Diet and Drinks in producing Disease, continued.

Drinks - However long some animals may subsist without drink, man stands in as much need of it, as he does of Aliment. It is said that nine-tenths of Mankind drink water for their common potation. It is the Beverage of Nature. Haller ascribes too much



much to Water when he says it preserved his
sight good to an old age. Water produces dis-
ease by its sensible qualities - first, by its cold-
ness, which affects teeth, stomach, &c. There are
more teeth drawn in summer than winter in
Philadelphia. Cold water acts, in inducing
death, &c. by inducing Syncope, &c. - It acts by sud-
denly abstracting stimulus. The bad effects may
be prevented by abstracting the heat of the
body gradually, previously to drinking, by
washing the hands & face in cold water - grasp-
ing the cup in both hands, &c. Cold water does
not allay thirst as well as that which has been
warmed a little / avoid, so called. - The conse-
quence of drinking cold water in the morn-
ing, is illness all day - for the sedative effects
of the water prepares the way for reaction
and fever. - The facility with which Water Ca-
stles with soaps, is the criterion of its purity.
It is a bad practice to drink cold water
in the morning, or between meals - or at
any time in large gulps - No person in
health

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health requires these practices - they injure digestion.

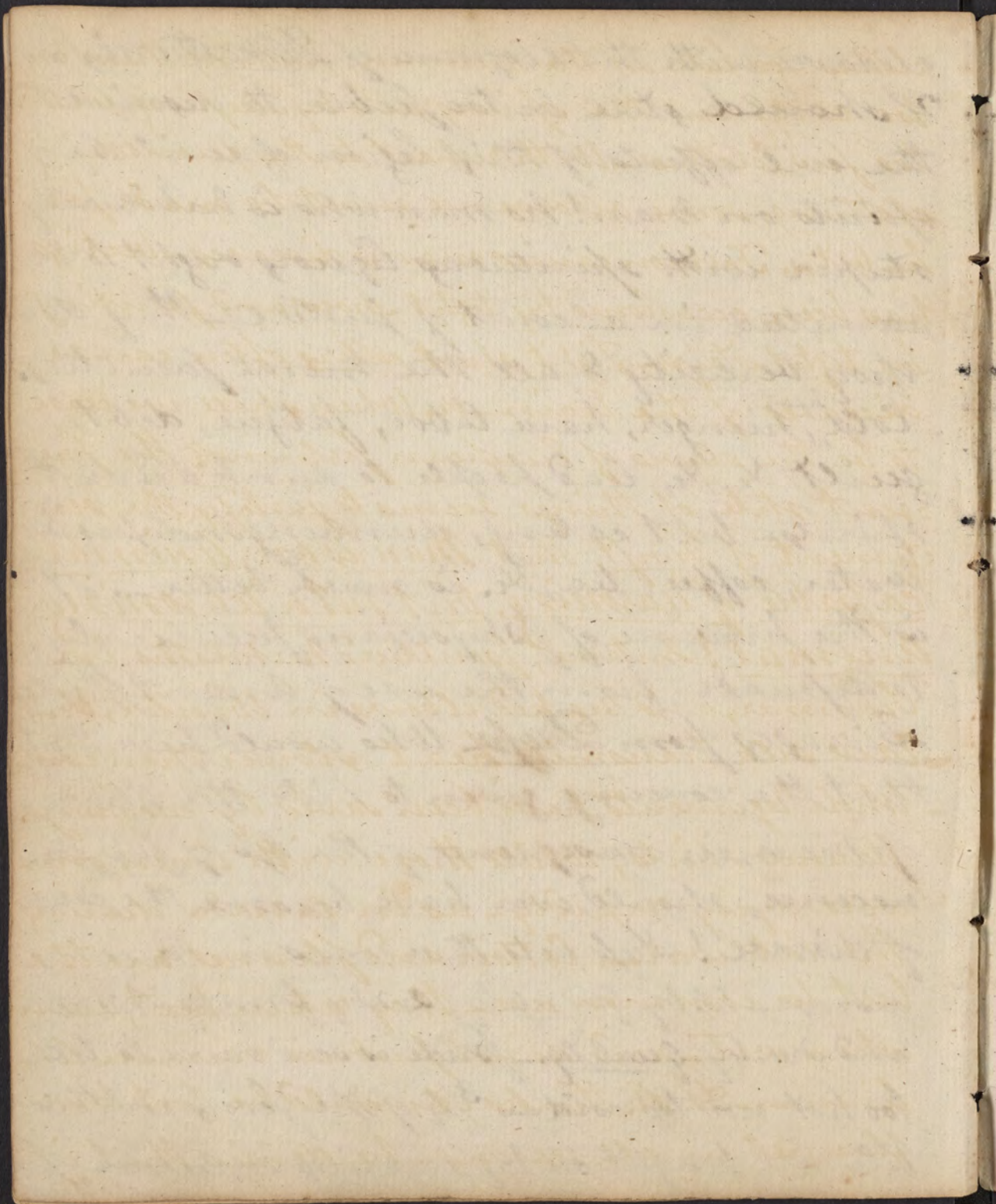
WINE - is composed of a saccharine matter cal-
-led must, acid, ^{ardent spirit}, and water - hence it contains a
considerable quantity of nourishment - The acute
effects of wine is Intoxication - the chronic ef-
-fects, are gout, ^{fatigue}, &c. - Dr. R. ascribes gout in the
limbs wholly to this cause; as he never saw one
case occur in any but wine-drinkers - Gout
is the effect solely of Ardent spirits and fer-
-mented liquors - Eating will not produce it -
The older wine is, the less disposed to cause gout -
less so when taken with food - Wine should
be seven years old; it then loses its acid -

Beer - is difficult to get drunk on - It cau-
-ses gout, palsy, Apoplexy, &c. - Dr. R. knew
several beer drinkers who died of Apoplexy.

Cider - does well enough with laborers - but is
bad for sedentary people - causes paleness,
gout, Rheumatism, &c. Dr. Franklin's first
fit of gout was produced by cider - A hot
iron plunged into cider prevents its bad
effects - Ardent Spirits - Had I an hun-
-dred tongues, says Dr. R. and each of them

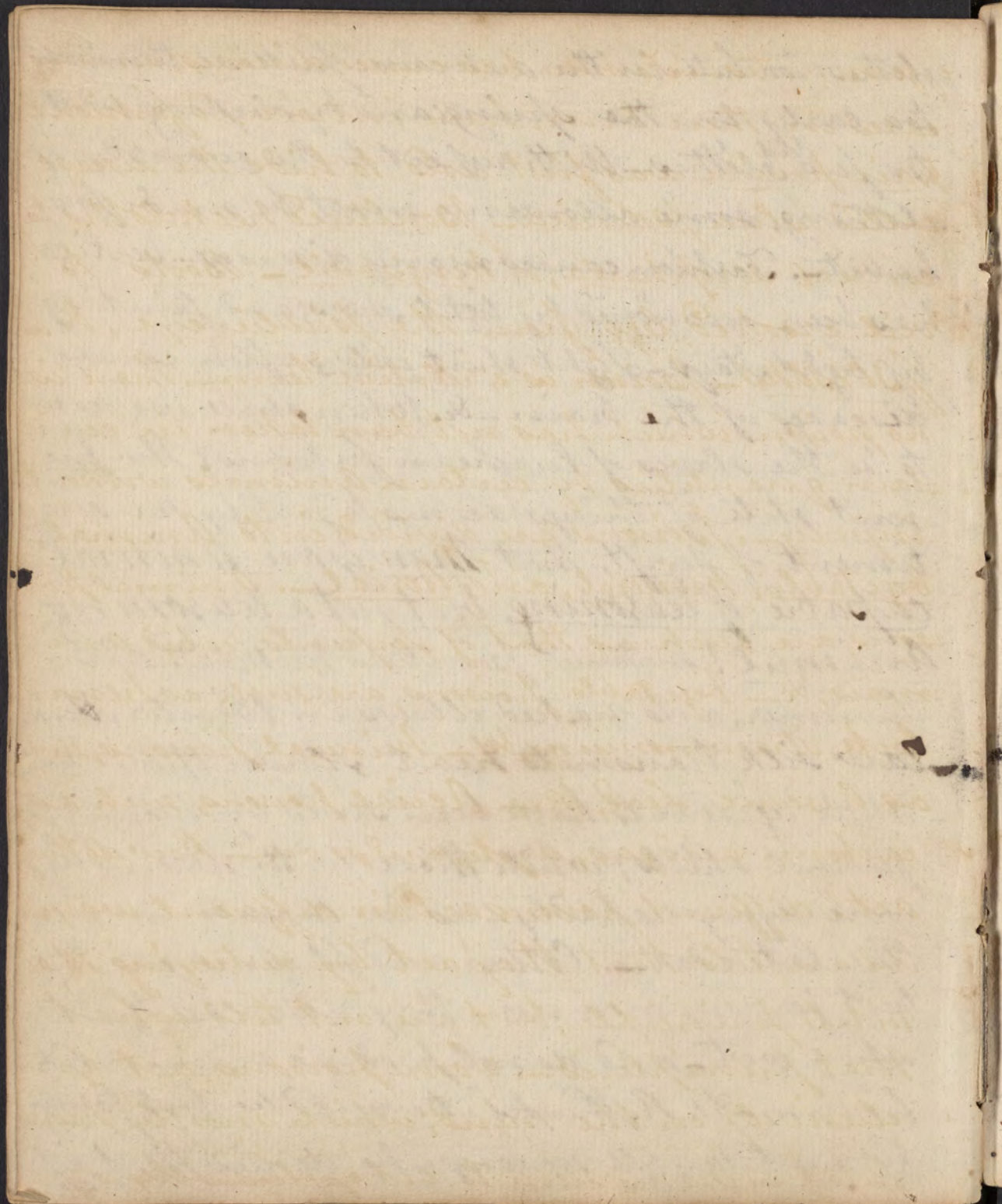
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endowed with the Eloquence of Demosthenes,
I should still be too feeble to describe
the evil effects of this legion of devilish
spirits on man! No man who is habitually
stupid with spirituous liquors ought to be
admitted in a court of justice - they de-
stroy veracity & all the moral faculties.
- Cold, ^{heat} hunger, hard labor, fatigue, debt,
guilt, &c. &c. lead people to drink ardent
spirits - but eating, drinking molasses &
water, coffee, tea, &c. is much better - It
is the province of Physicians, peculiarly,
to dissuade from the use of Ardent Spirits.
Diseases from Dress - Who would have thought
that the covering given to hide the shame
of man, in consequence of the loss of his in-
nocence, should ever have become the ^{remote} cause
of disease! Dress acts three ways in causing
disease - 1st. by Quantity; 2nd. by form, or Fashion;
and 3rd. by Quality. - Pride is said never to be
too hot nor too cold - 3/4 of the fevers in this
City are brought on by wearing summer
clothes



clothes too late in the autumn; putting them on too early in the spring; and by sleeping with too few ^{bed} clothes. With respect to the quantity of clothing, some allowance must be made for habit. Fashion causes many diseases. Vertigo has been occasioned by tight shoes; and fainting by tight stays. Tight shirt-collars often cause diseases of the brain &c. When shall we cease to be the slaves of European fashions? The present state of things seems to justify the sentiment of Swift, that Man is an Animal capable of reasoning, but not a reasoning Animal! Instance, poulticed neckcloths in Summer, and naked elbows in Winter, &c. &c. Raw silk transmits heat slower than wool. - Whole Regiments have been saved by wearing flannel shirts; while those with linen ones were dying rapidly - as in Canada during the late war. Cotton and flannel are the best for common use - they retain heat, even when wet - and do not produce vermin like linen. - Dr. R. thinks it would be best to wear flannel in all seasons - he denies that it

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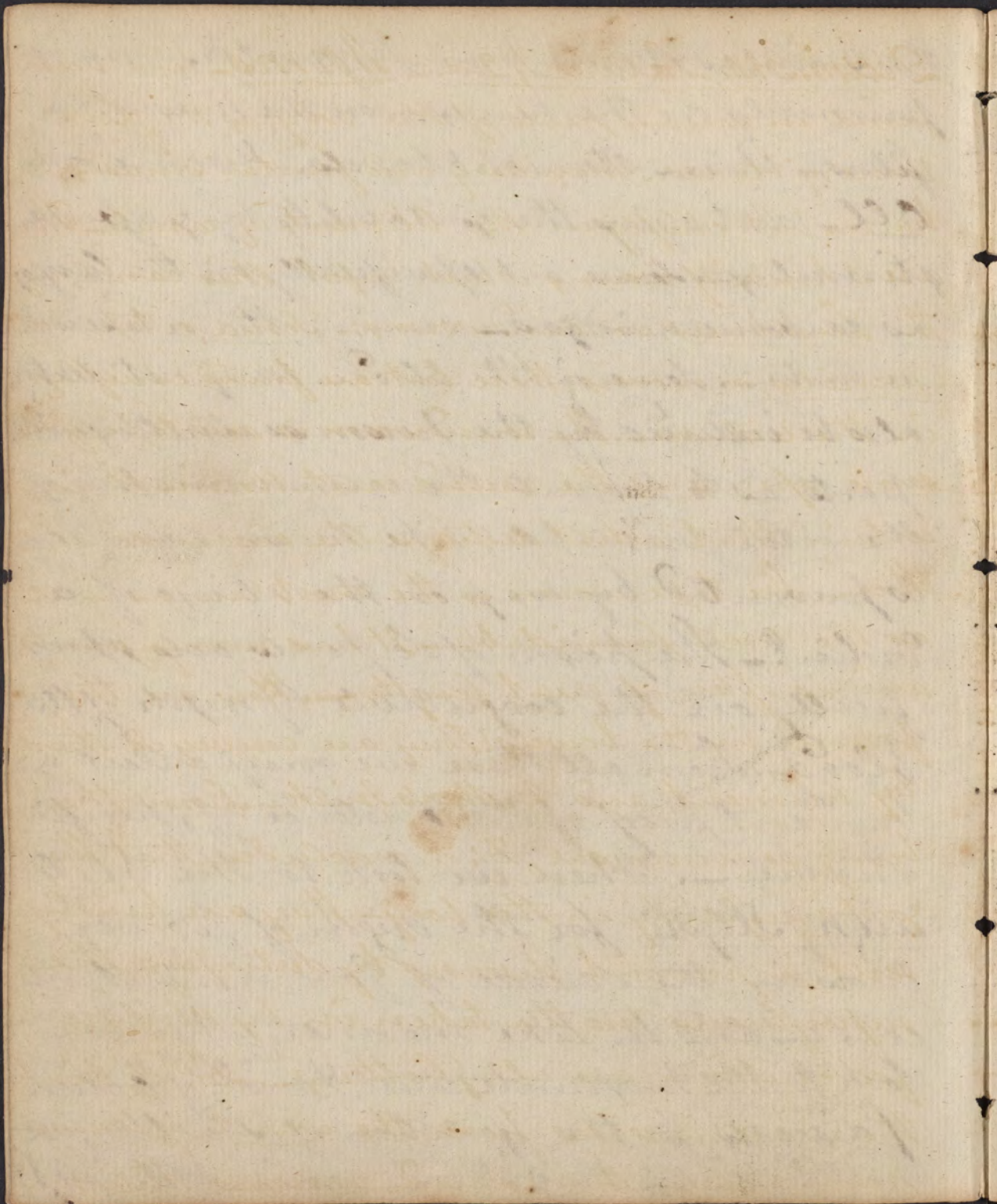


effeminates—Fashion has caused diseases; and diseases in their turn, have introduced fashions—Hair-powder was first used to hide the disease called plica polonica—Poulticed neckcloths to conceal scrophula, or king's evil—Boots to veil crooked legs from the public eye, &c.

POISONS—Poison is a relative term—There is no poison which has not been taken in certain quantities by certain animals without injury—Poisons are divided into Animal, Vegetable, Mineral, and Aerial—Animal poisons, are such as that of Serpents, rabid animals, &c.—Vegetable poisons, are such as hemlock, stramonium, &c.—Mineral poisons, such as Arsenic, Lead, &c.—Aerial poisons, such as carbonic acid gas, azote, and so on—How do they act? different poisons act in different ways. We are told that they act by destroying the vital principle; but are not told what that principle is—Some poisons act exclusively on the mind; which mostly prove fatal—Many seem to act ^{specifically} ~~exclusively~~ on the

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the Brain; as stramonium, pinkroot, &c. Some act primarily on the nerves, — on the muscular fibres, — skin, — stomach & bowels, — & some on all — destroying the excitability by excessive stimulating. Some act specifically on the lungs, as carbonic acid gas, — causing them to sink in water. — Some on the blood. — May not death also be induced by the poison so uniting with parts as to prevent the communication of the vital principle, like musical motion is prevented by wax on the string of a Violin? — The poison of Serpents acts specifically on the coagulable lymph of the blood. — From all these we may collect abundant proof of the existence of specific Stimuli. — When we look to the Sovereign People for the origin of power, Errors in the science of Government will cease — and in like manner, when we look to the proximate cause, & ^{state of the} mode of action of ^{system} diseases, for the regulation of practice, we shall terminate the existence of Errors in Medicine!?



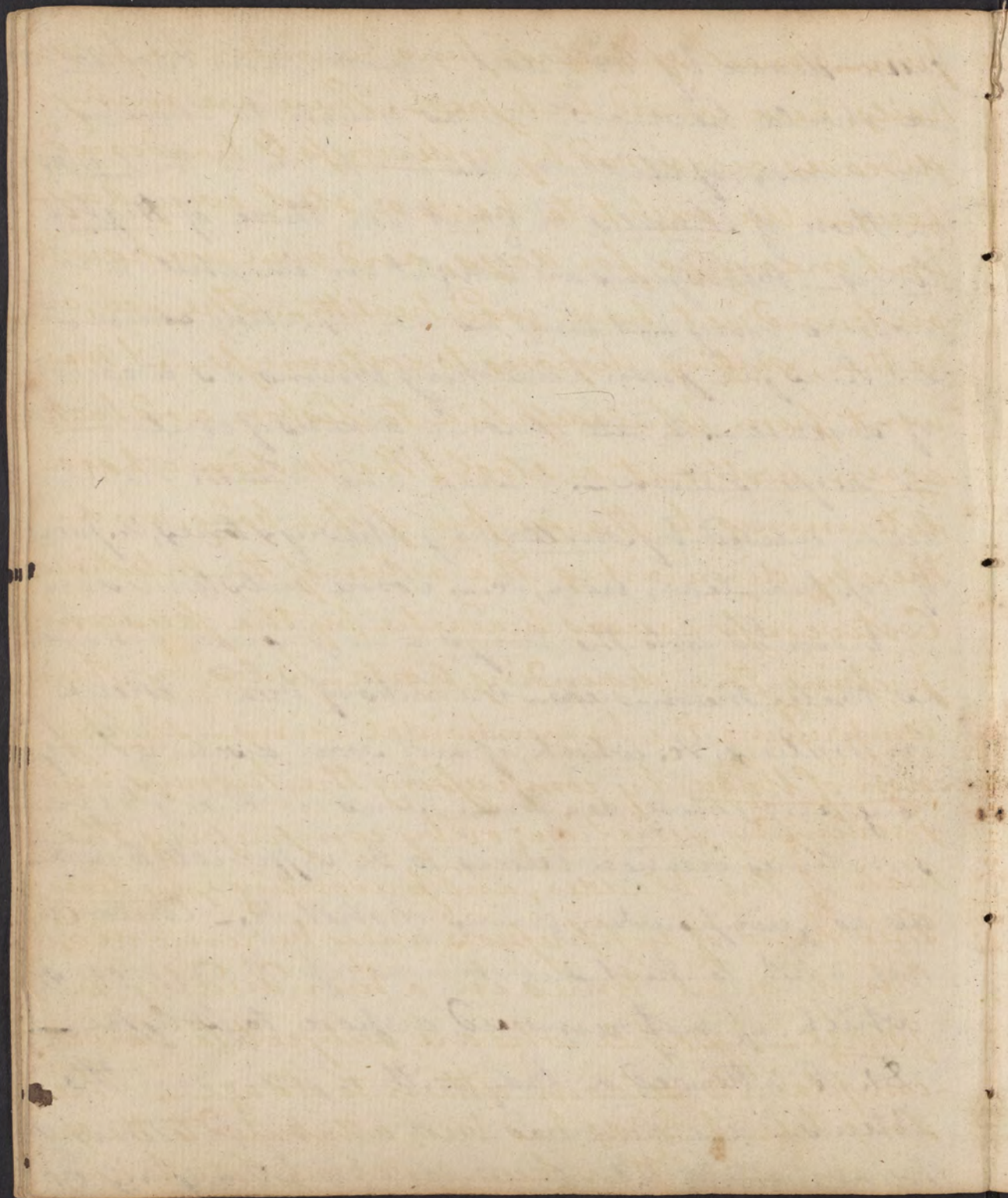
Decem. 31st. Lecture 4 2nd. - WORMS - have been found in various parts of the body; as the Liver, urinary bladder - Maxillary and frontal sinuses, & brain - but chiefly in the Alimentary canal - There are 3 kinds of worms which infest this canal, viz. the Lumbrices, or roundworms; - Tenia, or tape worm - Ascarides, or movers; these last are found chiefly in the rectum - The roundworm is said to be of the same species as the round earth-worm - It is certain that what destroys the one will the other - The tape-worm is the most rare, as well as the most formidable - It has many joints, and is often of great length - How are they formed in the bowels? They are conveyed there by Aliment, and Mother's Milk - From their being so universal, Dr. R. concludes, that they exist necessarily in the body - they are kindly sent to prevent diseases by destroying the superfluous matter taken in by children - for children are all Gluttons - Dr. R. thinks there are diseases from the want of worms - particularly the round-worms - they only cannot

24

Dear Mother

I have just received your letter of the 10th inst. and was very glad to hear from you. I am well and hope this finds you the same. I have been thinking of you very much lately and wondering how you are getting on. I have been very busy lately but I have managed to find some time to write to you. I have been thinking of you very much lately and wondering how you are getting on. I have been very busy lately but I have managed to find some time to write to you. I have been thinking of you very much lately and wondering how you are getting on. I have been very busy lately but I have managed to find some time to write to you.

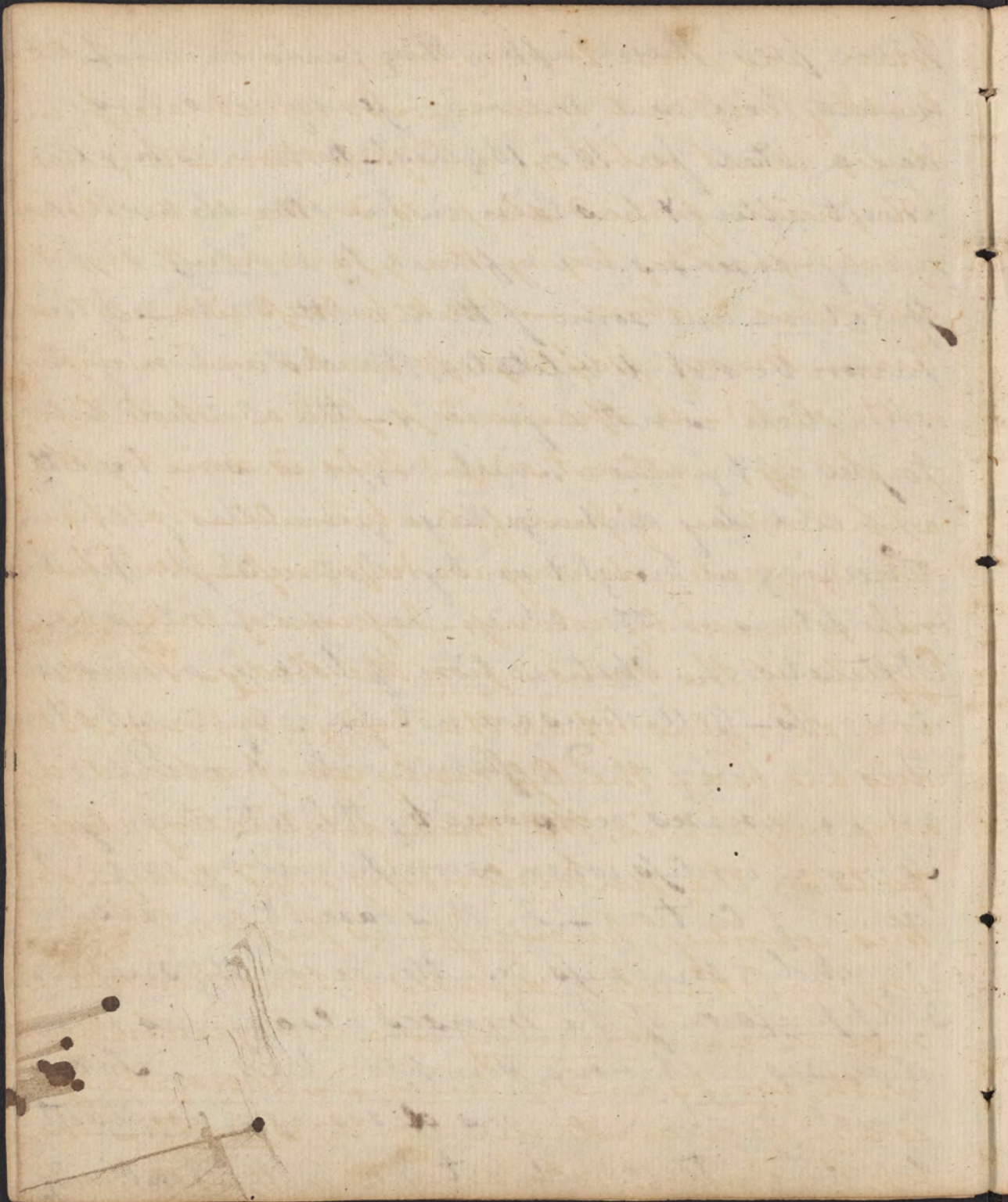
cause disease by too great number, and error loci.
We should have our eye as much to Worms in
the diseases of Children, as we have to the Menses
in those of Females, or Gout in those of High-
Livers. When fevers are brought on in children,
worms may act only as an exciting cause -
Dr. R. is far from overlooking Worms as a cause
of disease. In all chronic diseases of children
he suspects them. Disease and Death have
been caused by swallowing cherry stones, &c. pieces
of copper, lead, iron, &c. Some substances are
introduced into the lungs and produce disease;
as Water Melon-seeds - Crumbs of bread, - Meal
in Millers, &c. which, if not soon discharged, by
coughing, cause death. Pins in the flesh
sometimes occasion ulcers to be difficult to heal -
as do gun-powder, grains of shot, &c. - Children
are apt to put substances up their noses,
which, if not removed, dispose to polypi -
Dr. R. attended a Lady with a pain in the
Uterus - she recovered - not by any medicine of
mine, said the Doctor, but by discharging, &c.



pin. Small splinters, pins, &c. under the finger
nails, have caused lock-jaw. There are many
diseases occasioned by costiveness, & hardened
feces. We ought to have a stool every day—
but many go for days, and even weeks with-
out; and yet have good health. The sea, or
rather, sailing disposes to costiveness. A man
went from Philadelphia to Lisbon and back
again without a stool! The motion at sea
determines to the surface of the body, and
thereby diminishes the action of the Intestines.
Costiveness causes headache, by the feces com-
pressing the descending Aorta—piles, by their
compressing the haemorrhoidal veins—suppres-
sion of Urine by compressing the kidneys, and
preventing secretion; or by compressing the
neck of the bladder, and preventing excretion.
This kind of suppression may be removed,
Ninety nine times in a hundred, by a
Purge. People who are subject to bowel
complaints seldom attain to old age. The
Long Life of Birds has been attributed to the speed-
y discharge of their feces. No absorption taking
place

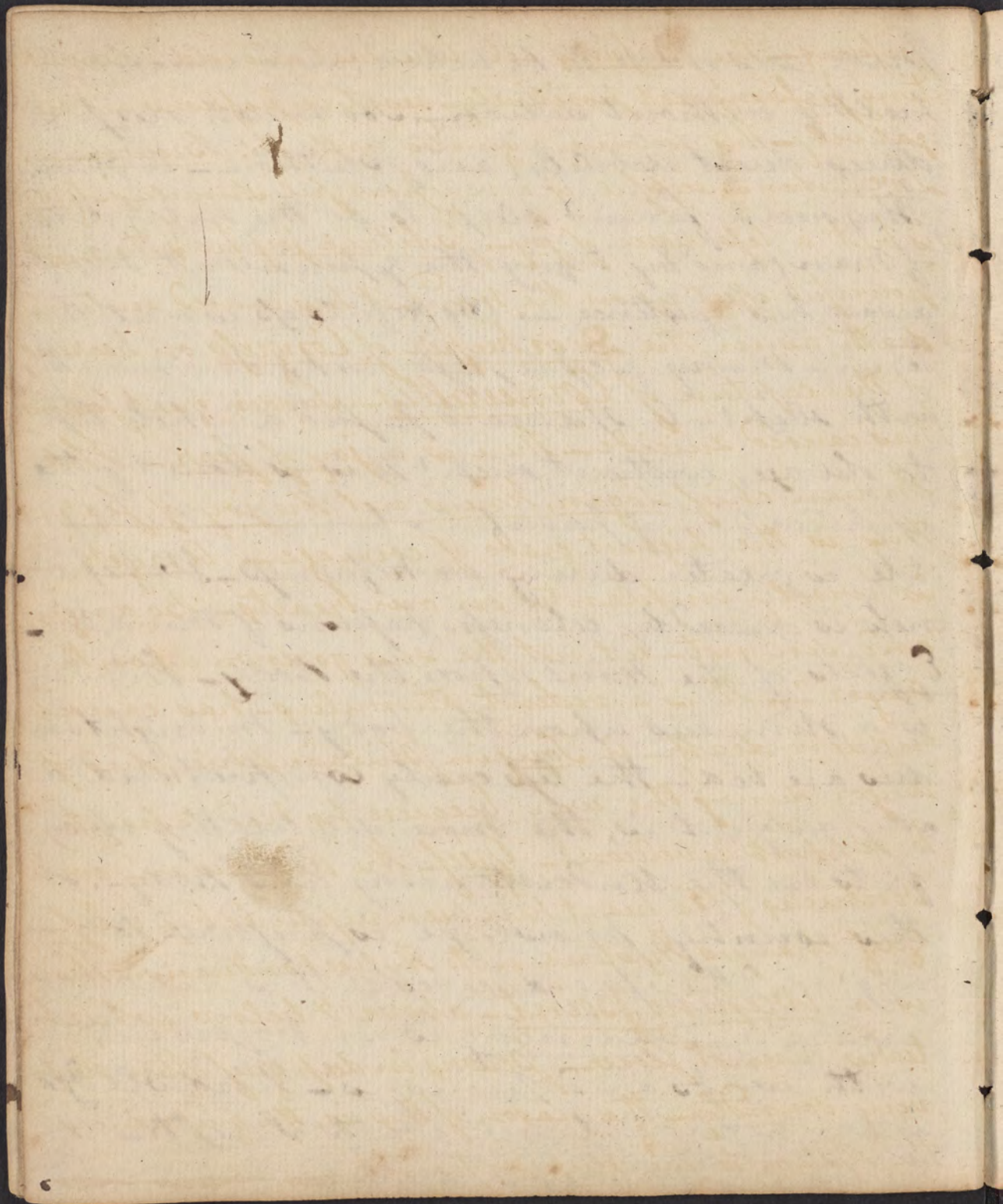
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place from them, after they become acrid. It is said there is a man in Jersey who has not had a stool for 10 or 15 years! - He vomits his Aliment after it has lain in his stomach awhile. Many diseases are referred to suppressed perspiration - and some of them with truth. If a person be not debilitated, the obstruction of perspiration is not injurious - the obstructed matter passes off by urine; - instance, persons in health in a cold day discharge large quantities of Urine. Sneezing is brought on by obstructed perspiration. - Eruptions on the skin occur from chronic obstruction. - Obstruction of bile produces costiveness. - Gall-stones are not of a calculous nature - they are oily and inflammable, &c. - There are no diseases occasioned by the retention of Semen; unless when accompanied by urgent desire of Coition. - In this case it causes melancholy, Madness, &c. attended with Priapism. Suppression of the Menses also causes some diseases; as Chlorosis, Hemoptoe, &c. &c. - Too much motion causes diseases of indirect debility - Too much rest those of direct debility.

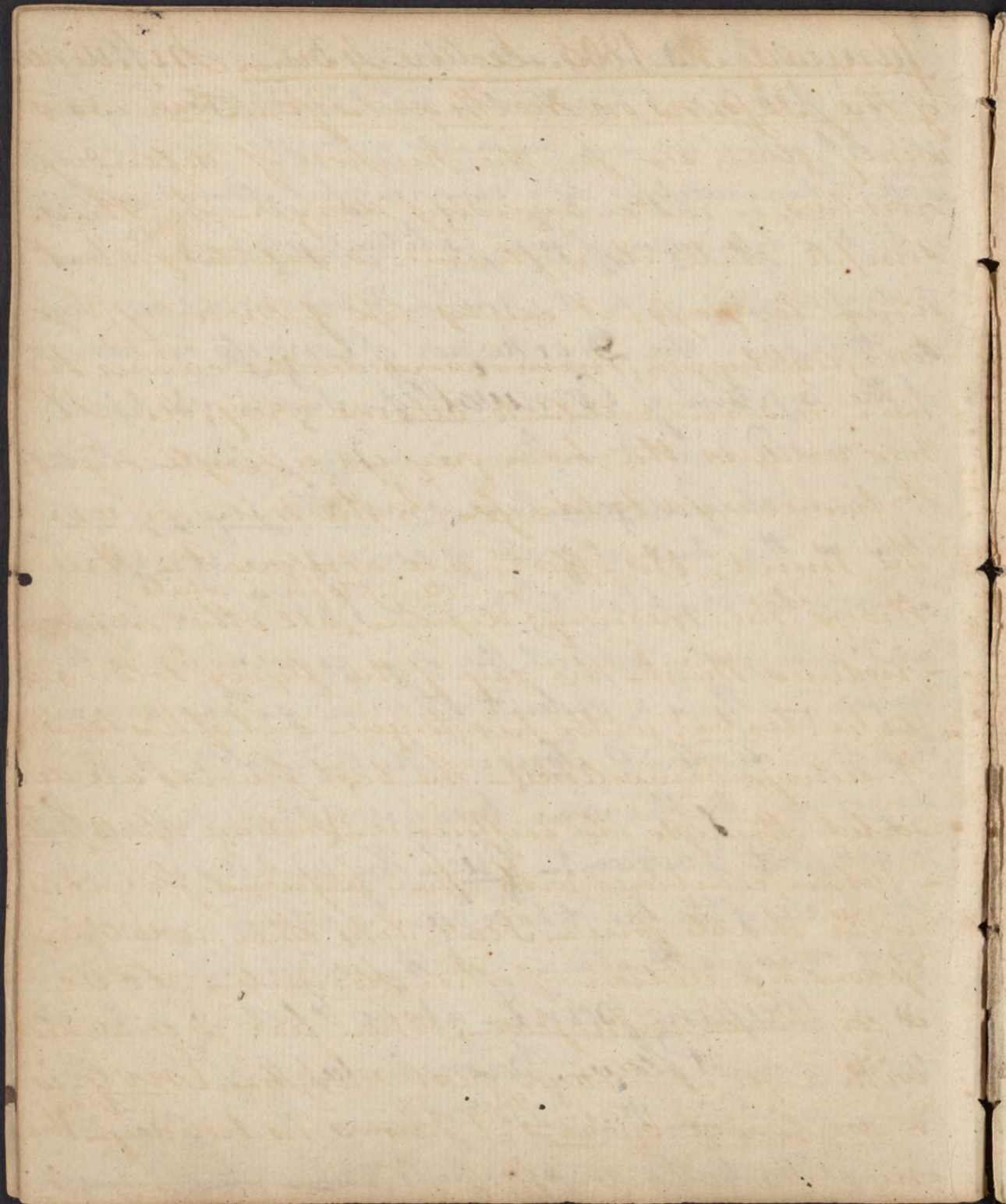


Man was made to be active; and cannot be healthy without action. Too much sleep induces direct debility, and Plethora - A German Physician fancied sleep to be the natural state of man; and by trying the experiment, slept away his existence. Wakefulness is a relative term - Many people pass weeks and months with sleep! - A Spaniard passed a whole life, to old age, without sleep! This is done by the application of powerful stimuli - The appetite is greater during wakefulness - Wakefulness is caused by coldness - passions of mind, &c. -

Effects of the Mind upon the Body - Thinking is a stimulus upon the body - Midnight studies are bad - the less easily comprehended any subject is, the more debilitating its effects on the Understanding and Body. - In this country, knowledge is preferred to learning; and therefore diseases of this kind are more rare. - Learning is an acquaintance with words and opinions - Knowledge is an acquaintance with Truth - The less the understanding is employed, the stronger the



passions—The Passions act like heat and cold—stimulating passions act positively—sedative passions act negatively—this doctrine originated with Dr. Brown—Love, when successful, is a very powerful stimulus—Grief is but a less degree of joy—Political joy has the most powerful effect upon the mind—it has caused instant death; as in the Doorkeeper of Congress on hearing of the capture of Cornwallis—Sudden great fortune has caused suicide—There is a joy of fear—The Indian chief, Logan, knew not the joy of fear—This is the highest grade of courage—Anger—is wisely implanted in our breasts—"Be angry and sin not—let not the sun go down upon thine anger"—It is a violent stimulus—has caused sudden death—A Tory in Philadelphia, died of anger during the war because he had to pay tax to support rebellion!—Grief—The auricles and even ventricles of the heart have been ruptured by grief—Grief changes Hysteria into Hypochondriasis—There is a Weeping point—above & below which, tears cannot flow—Persons in deep grief often sleep very soundly—the reason of this is, the grief reduces the system to the sleeping point.



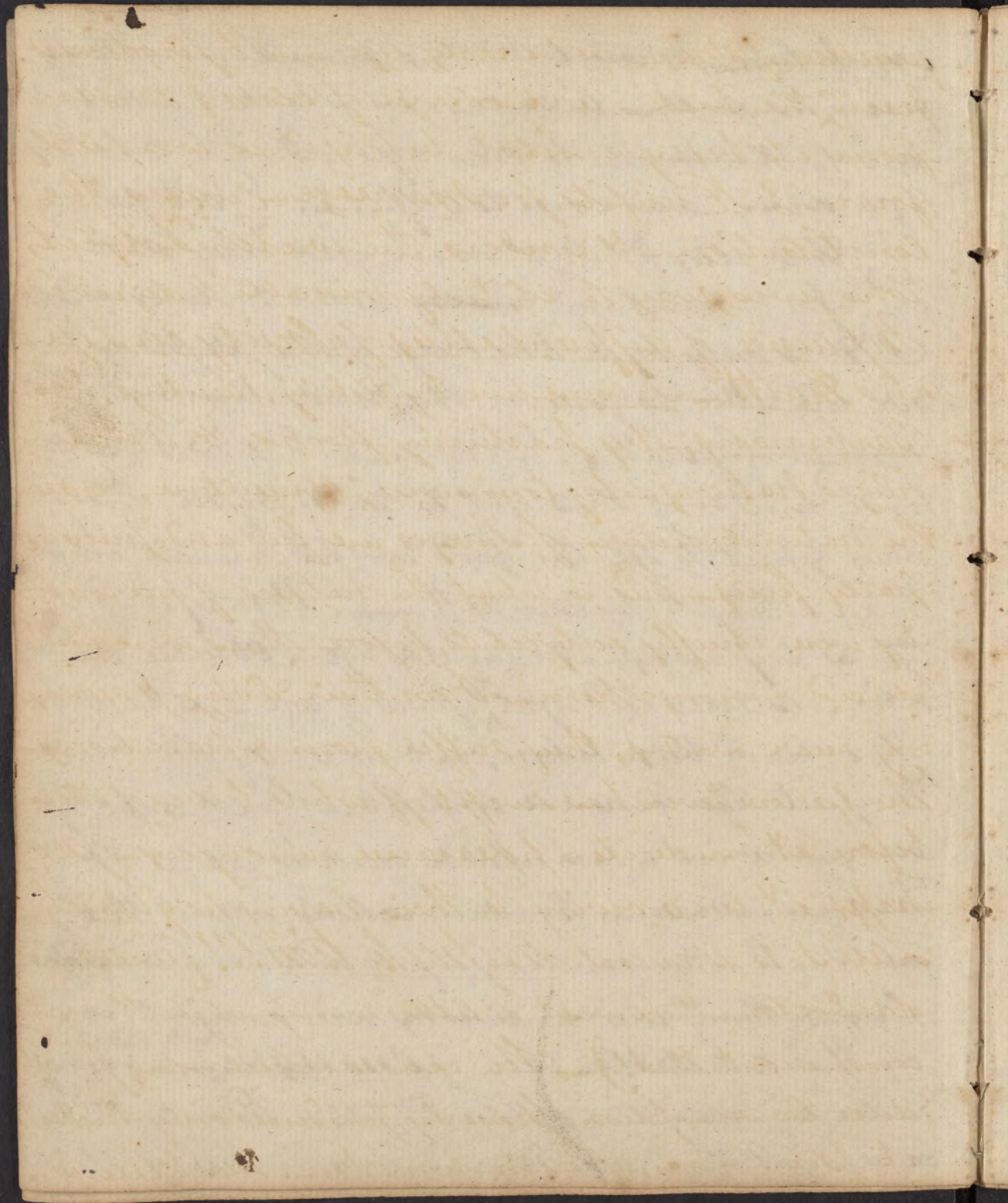
January 3rd. 1803. Lecture 43rd. Influence
of the Passions on Health and Life. Fear was
wisely given us for the purpose of defending
ourselves, or rather avoiding danger. In this
simple state its influence is salutary - but
when to excess, it causes loss of memory, hyp:
teria, asphyxia, mania, and death - causes the
hair to stand erect - to become grey, &c. - It
has rendered the hair grey in a single night.
It has caused baldness. In the mind, or on
the mind, its effects are also great. It de-
stroy^{or interrupts for a while}s the memory; deposes, all other passions
- produces thirst - The cry of the flying soldier is
Water! Water! with his tongue out of his mouth.
It destroys benevolence - The best friends are de-
serted through its influence. (Instance, Apollonius) -
- When combined with other passions, fear acts
with double force. Fear, like other sedatives,
favors the action of other stimuli. Love
is combined with fear. When fear is combined
with anger it produces great strength. Envy - is
a continual blister ^{or fire} - it knows no holiday. ^(See Essay) Ma:
ny of the diseases of high Life are owing to it.

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Ambition—Its mortifications are attended with dis-
ease and death—Avarice abstracts that which is
due to the World—to Country—to Friends, to Wife,
to Children,—and even to Self—.

Epitaph—
"Here lies his grace— in cold clay clad,
who died For want of using what he had"—.

It is only by a knowledge of the passions that
we are able to govern the Understandings, ^{or morals} of
Men— Legislators, Divines, and Schoolmasters
have much of this yet to learn, before they
may expect to see the good works prevail which
they attempt to inculcate— Venery in early
life is injurious—also in old age— Obscene conver-
sation is increased after ³⁰ years of age— Spanish
flies have been taken, in Europe, by old men,
to excite the venereal appetite— Death was the
consequence in a case which occurred while Dr. R.
was in London— Boarding schools, where the Sexes
see each other continually, excite venereal de-
sires— Many terrible diseases are brought on
by the detestable vice of Onanism, ^{or vice}— A young
Man in Massachusetts, Etat. 21 years, emitted
semen 4 times a-day in consequence of the prae



practice of Onanism in early life -- It produces
painⁱⁿ the back -- a discharge of bloody semen
from its being emitted before it is completely
formed? It unfits for marriage -- ruins the
Constitution -- & renders the wretched object,
who gives way to it, truly miserable & degraded.

Influence of different states of Society on Life
and Health -- Savages, live by fishing, hunting, &c.
Barbarians, -- by pasturing flocks, &c. And Ci-
vilized Nations, -- by commerce, agriculture, &c. &c.
The natural diseases of Savages are few and princi-
:pally fevers -- This is what the natives of our Coun-
:try were chiefly subject to, before they were intro-
:duced among them -- From their living & encamp-
:ing near waters, they suffer from phalations --
The yellow fever has swept off whole tribes of them
before it made its appearance among us -- Per-
:haps it was owing to their having no Quarantine
Laws to prevent Importation!!! (Well done
old Doctor, -- thou wast a little merry when thou
composedst this!) -- The causes which now pro-
:duce Consumption, formerly produced only moder-
:ate Pneumony, rheumatism, &c. -- Hysteria is a

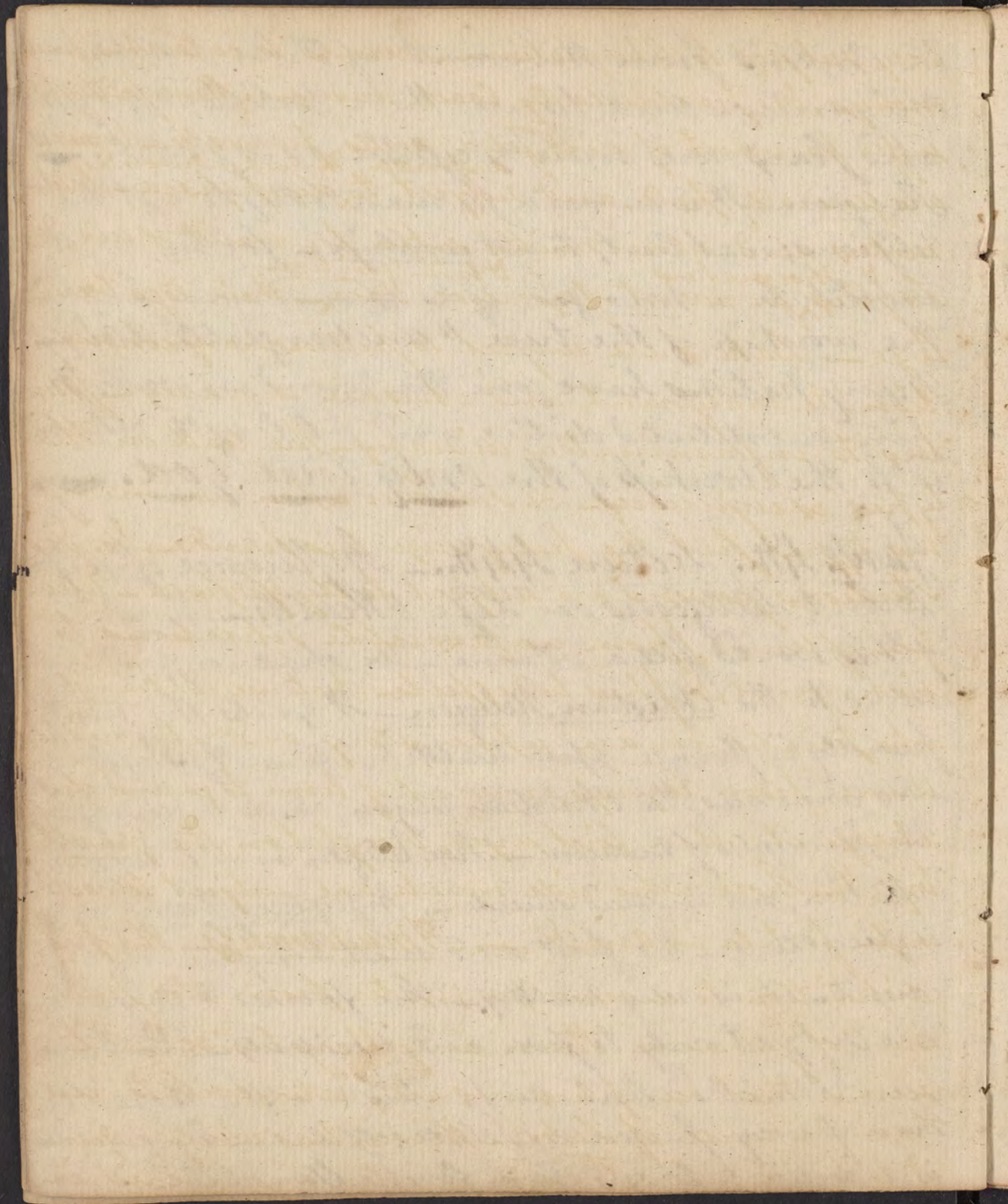
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a disease of the 1st. or highest grade of Life; - Gout of
the 2nd. - as in independent gentlemen; - 3rd. Fever;
4th. Common People; as Sailors, Soldiers, &c. have pleu-
sis, &c. - Influence of Government on Health
and Life - Despotic Governments hold life in a
feeble state - The Negro Slaves in the West Indies
show more irritability than sensibility - hence they
are more liable to convulsive diseases - but bear
surgical operations better - Mixed governments
are not good - they dispose to great Anxiety, &c. -
Instance, Lord Chatham, &c. - Republican
Governments, or those dependent on the
Sovereignty of the People, are the best -
The excitability and excitement are here equal;
and are kept so by the frequent occurrence
of Elections - You see here, Gentlemen, says Dr.
Rush, the same Unity of Truth as elsewhere.
A Physician who is not a Republican
contests his own principles - Joy acts with
more force on Britons than Americans, from
the accumulation of excitability, occasioned by
fear of Oppression - Elections serve to carry off
the excitability, like chimneys carry off smoke;
and hence excitability is more accumulative

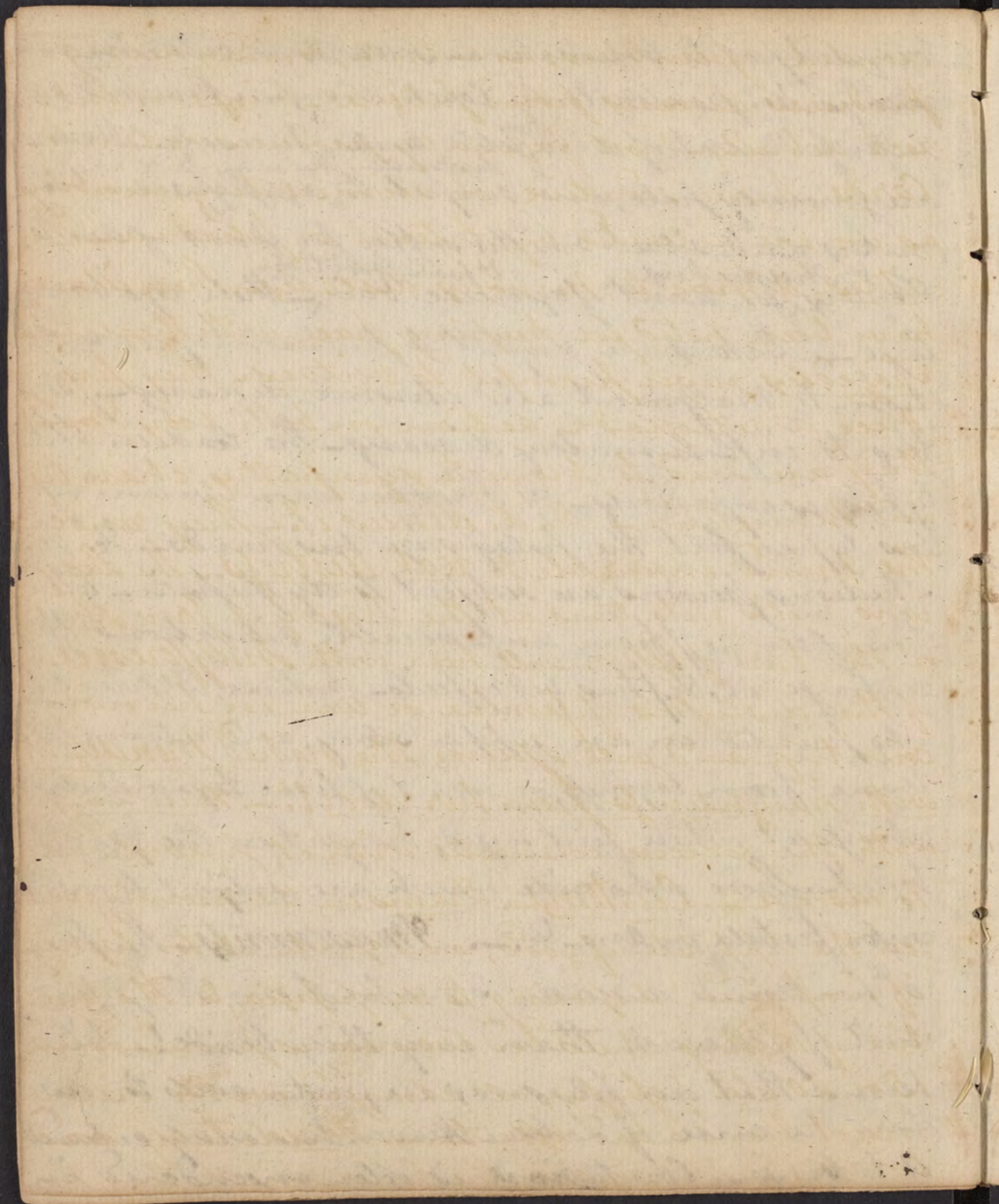
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in Britons from the want of those political
chimnies—and hence their political joys
and fears are more excessive and fatal!—
Religion—It is in vain for man to try to not be
religious; or at least, to not worship—for he will
substitute a new god, if he should even forsake
the worship of the true & unchangeable deity—
Many nations have gone the round in worship:
—ing substituted deities, and at length return-
ed to the worship of the only true God. —

Jan'y 4th. Lecture 44th. — Influence of dif-
ferent Religions on Life & Health—The relation
of this would fill a volume—We shall confine our-
selves to the Christian Religion—It exerts the most
friendly influence upon health & Life—A Physician
who renounces the Christian religion, stands removed from
the principles of medicine—True religion never caused per-
secution, nor induced suicide—Influence of Employments
Agriculture—The first and most simple employ-
ment—it is very healthy—The farmer & carpenter
are subject only to fever and accidents—It has
been remarked that carpenters are the longest li-
ved of any person in Philadelphia—Day laborers
are subject to sore legs, sores, &c. Soldiers are very



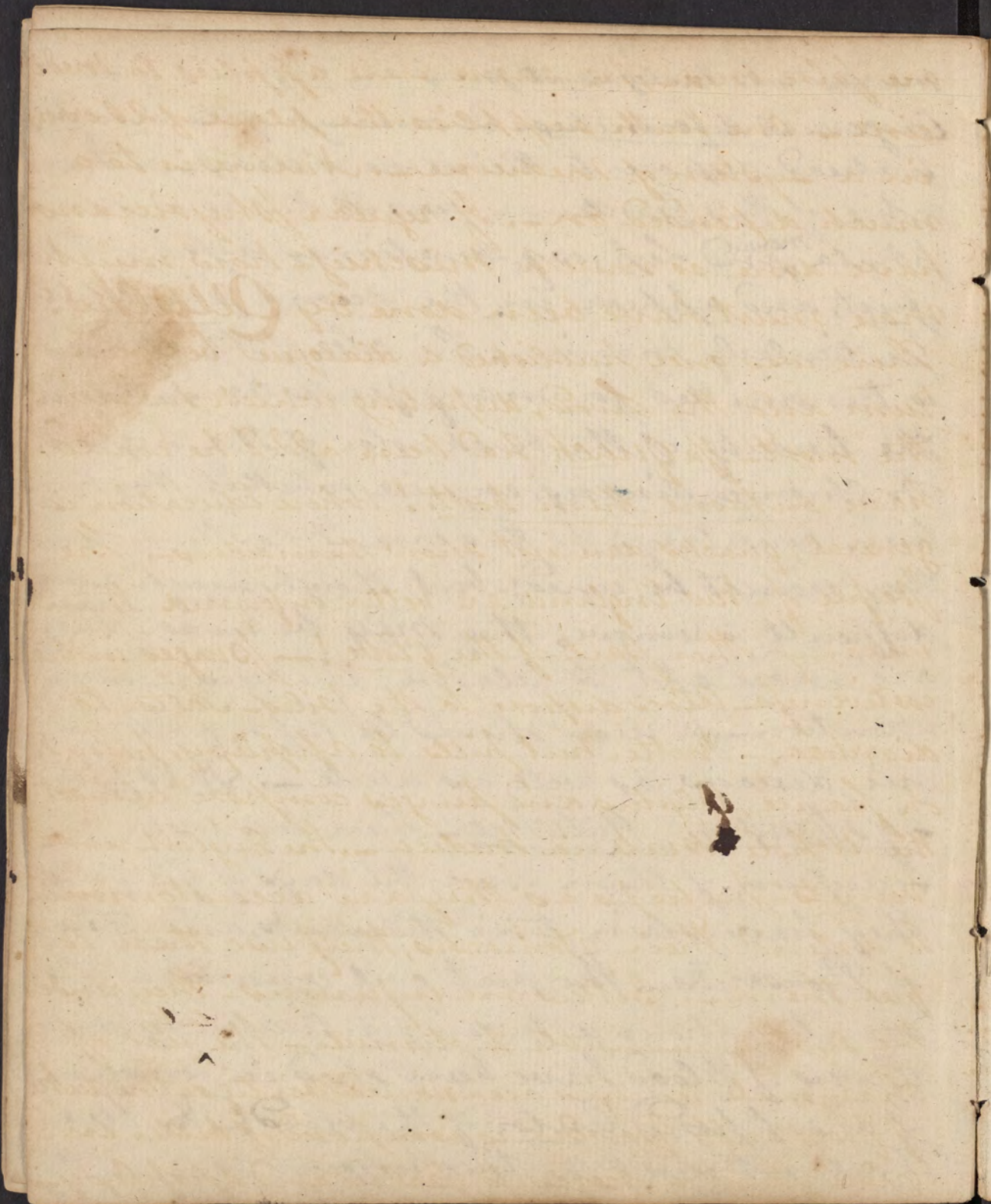
very subject to Rheumatism - Servants to catarrhs, pneumonies, &c. particularly Coach-drivers - Manufacturers suffer for want of air, ^{from} fetid smells, fumes, &c. - Weavers are generally pale, and subject to ^{dyspnoea} dyspnoea, ^{hypochondriasis, &c.} Watch-makers and silver-smiths suffer for want of air, &c. Tailors, ^{& Shoemakers} for want of exercise ^{& from position} fair - their legs become large - Bakers are subject to pulmonary consumption - to malignant and chronic diseases - Printers to inflammatory diseases - The lead in the types is injurious - Dr. Franklin upon warming his types felt the palsy seize his hands - &c. &c. Studious persons are subject to dyspnoea - Retention of urine, from unfavorable situations to discharge it, &c. has bad effects - Instance, Dr. Franklin, who printed in an upper story, and retained his urine from laziness, or want of time to go and discharge it when first urged, brought on the gravel by it - Those who ride much are subject to costiveness - fistula in ano, &c. - Amusements - The predisposition to disease, is greater from the pursuit of pleasure than any thing beside! - It seems that our pleasures are greater evils to us than the curse of Labor - Heaven has wisely ordained it to be so - Contagion is often engendered in



crowded assemblies; as catarrh, &c. - Dancing
produces diseases from fatigue - brings on indi-
rect debility - most frequently produces catarrh -
Cards prove sedative or stimulating, according
as we are actuated by Interest or pleasure - The-
atres dispose to nervous diseases - These diseases
have been noted for keeping pace with theatres -
Tragedies never prompt to virtues - they pro-
duce a retrograde action on both body & mind.
They are said to promote sympathy, charity,
and Benevolence - Dr. R. denies it - They render
the mind insensible to real distress - The Lady
who melts into tears at the Tragedy of Jane Shore,
or the Earl of Essex, will hear with Indifference
of the distresses of famine or war in her own
country, - and will spurn the naked Mendicant
with haughtiness from her door!! - Hunting,
with the exercise connected with it, predisposes
to disease - Customs - Drams in the morning weak-
en the appetite if good, and excite it too highly
if impaired, - disposing to dyspepsia, &c. The prac-
tice of visiting child-bed women is pernicious -
15 or 20 old Gossips, all charged with news,
must have a bad effect - Hereditary, and
Congenial diseases - The lues, small Pox, mea

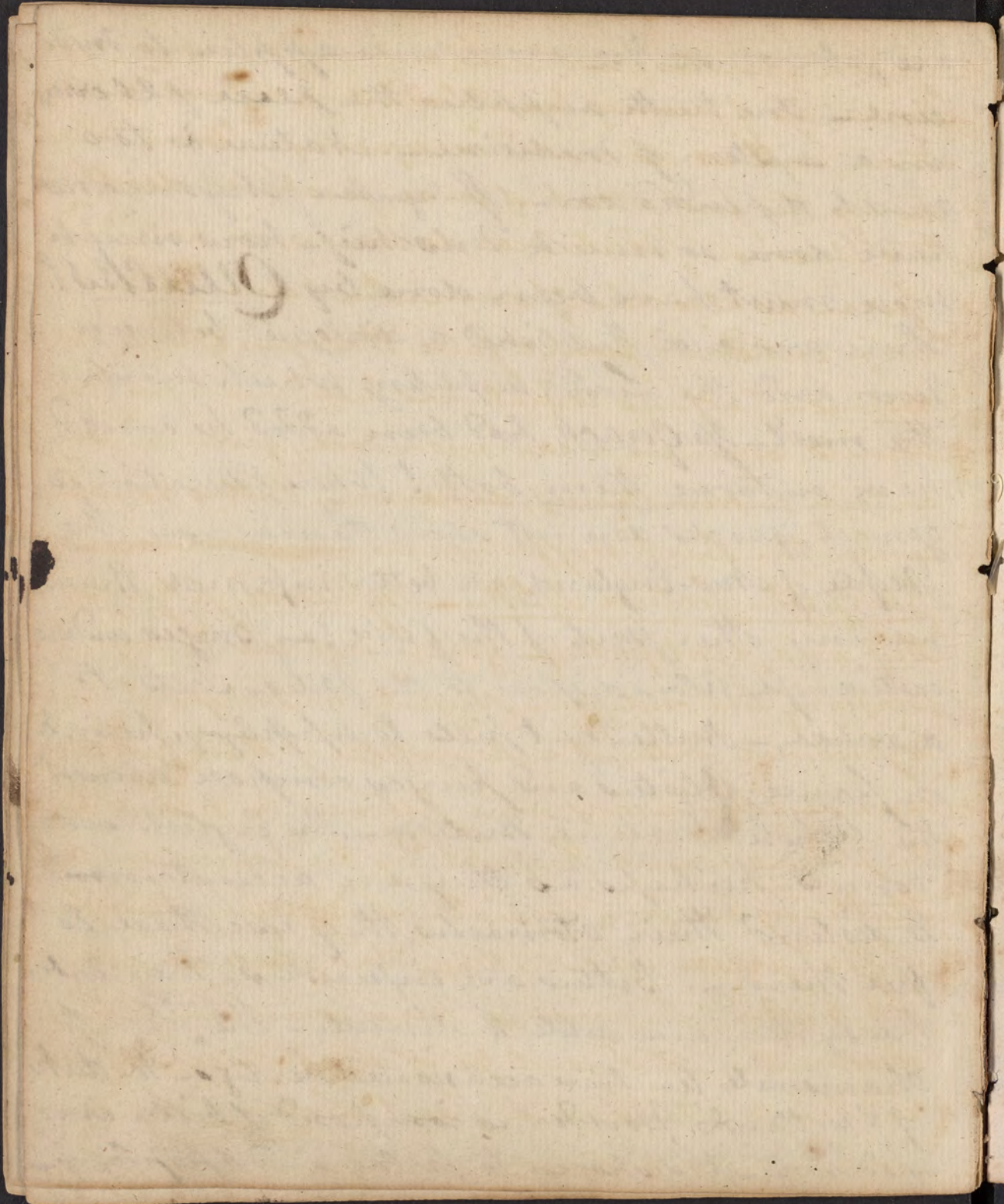
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meazles, and Malignant fevers are congenial diseases.
Congenial deformities—A sameness of the eyes &
forehead dispose to the same diseases—Take
notice of this, Gentlemen, says H. R.—Gout, scro:
fulula, ^{mania} and Leprosy, sometimes pass by the
first, and appear in the second generation.
Particularly mania—The color of the skin
is transmitted for many generations—hence
the tenacity of the black color of the negroes.
In Chronic diseases, enquire whether they have
been hereditary—In this case it has been said
they cannot be cured;—but, though much more
difficult to remove, they may be cured—They
are more apt to relapse, and require more
attention—A record should be kept of all chro:
nic diseases, as well as acute—False
Systems in Medicine—There has been a
succession of them since the days of Galen—
They have slain their thousands, and tens
of thousands—The great evil consists in the
servile adherence to one particular system—
Rivers of blood have been shed in consequence
of a supposed lentor of the blood!—&c. We
should not reject the true religion because there
are



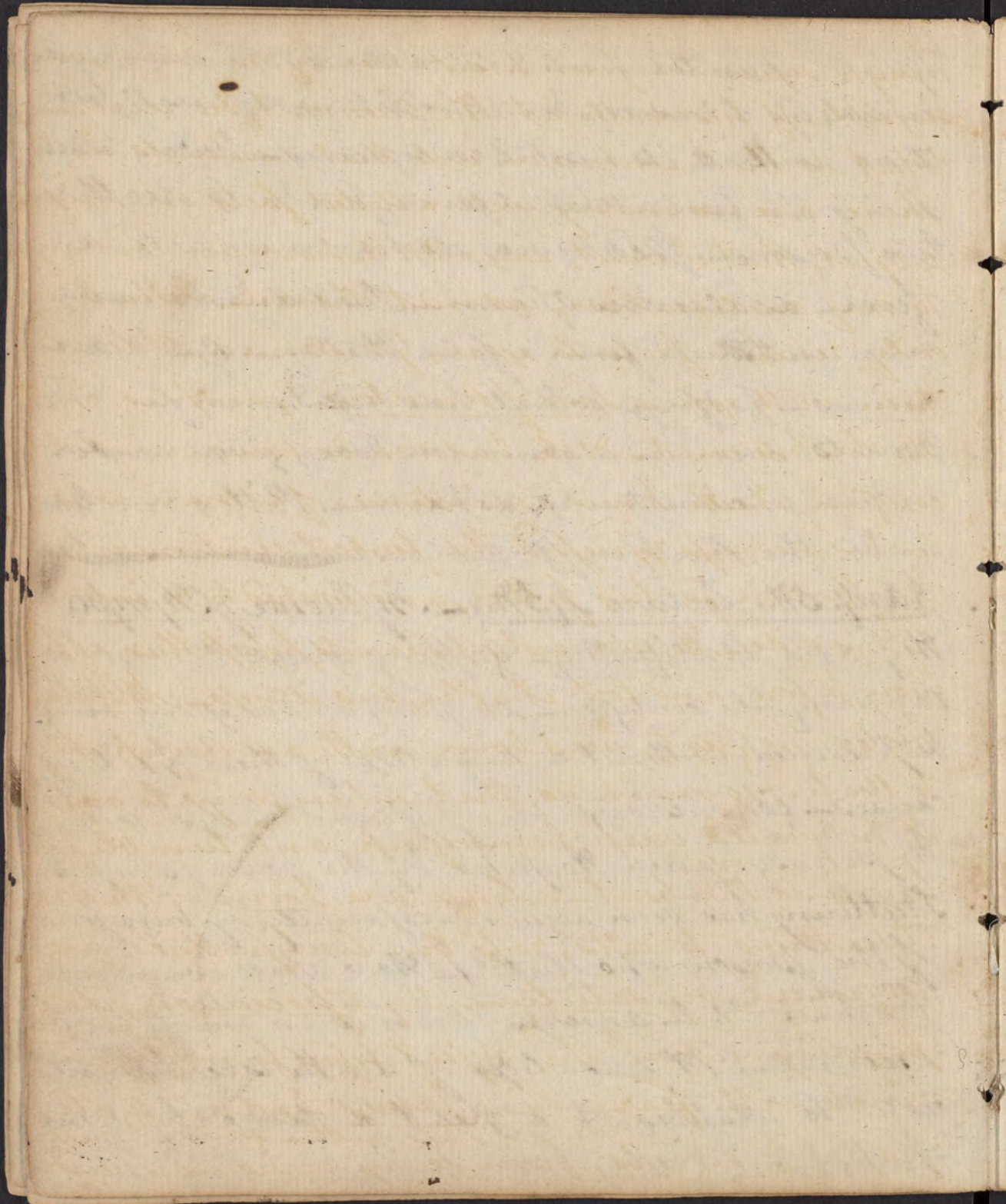
are false ones. - The same rule applies to Medicine. - One truth supplies the place of 20 errors in a system of medicine. - Nature is too much depended on. - If regular Physicians have done so much mischief - how much more must have been done by Quacks?

There was once published a dialogue between Rum and the Sword, disputing which had slain the most - If a Quack had been added he could have outdone them both! Where Education is general, quacks dare not show themselves. The People of New-England are better informed than in any other part of the Globe! - Purges induce costiveness. Aloes dispose to the Piles. Salts to diarrhoea, - Bitter nut pills to apoplexy, palsy &c. In France, Olesters and purges compose almost the whole Materia Medica. - The English use vomits - perhaps as they are accustomed to distend their stomachs, they use them to free them. - Bitters are injurious. They render the system insensible to stimuli. - The ^{daily} use of Chamomile tea has occasioned vertigo. - The Duke of Portland's Powder is composed of bitter ingredients - it disposes to palsy and apoplexy.

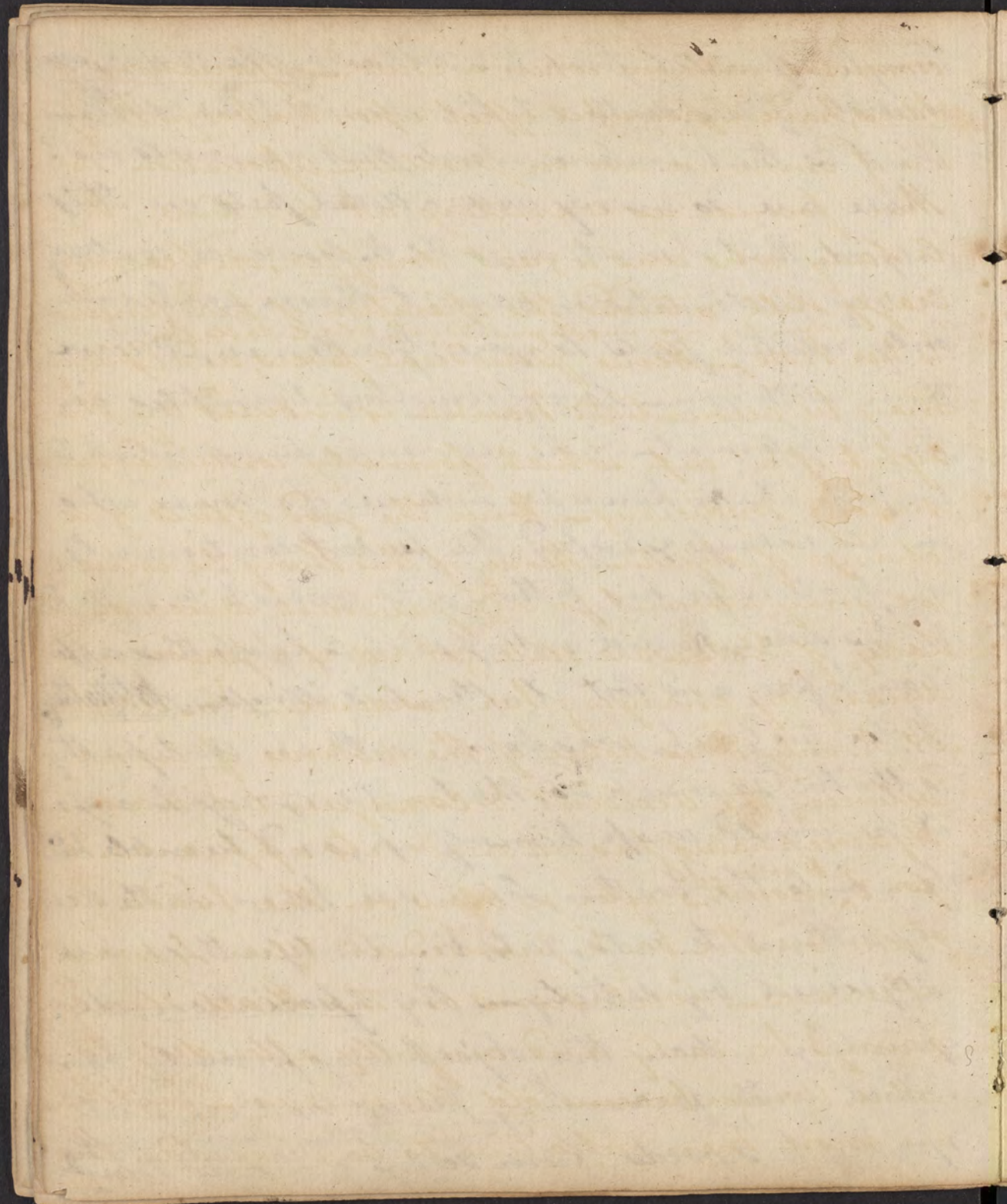


Opium, when too much used, disposes to languor, dyspepsia, loss of memory, &c. - Bloodletting, disposes to plethora, with all its morbid consequences. - Wine, taken during the first attack of fever, produced death in two persons. - Pediluvia do harm in active fever - as also does Opium. - Diet drinks have been introduced from a false theory. - Quack medicines. - Godfrey's cordial has killed many. - &c. &c. Vomits, even in a common dose, given under certain circumstances, do harm. - Bitters sometimes render the Bark ineffectual.

Jan'y 5th. Lecture 45th. - Influence of Sympathy and Antipathy - Gaping spreads through a company like contagion - Laughing and weeping may be produced without a knowledge of their exciting causes. - Convulsions were produced in 6 persons in the Pennsylvania Hospital by the power of Sympathy. Stuttering has been acquired - especially by being fond of the person who stutters. - How shall we account for this? Dr. R. answers, Man is an imitative animal. - A knowledge of death is communicated to relatives at a great distance by some unknown Intelligence. - Instance, a boy, who, m

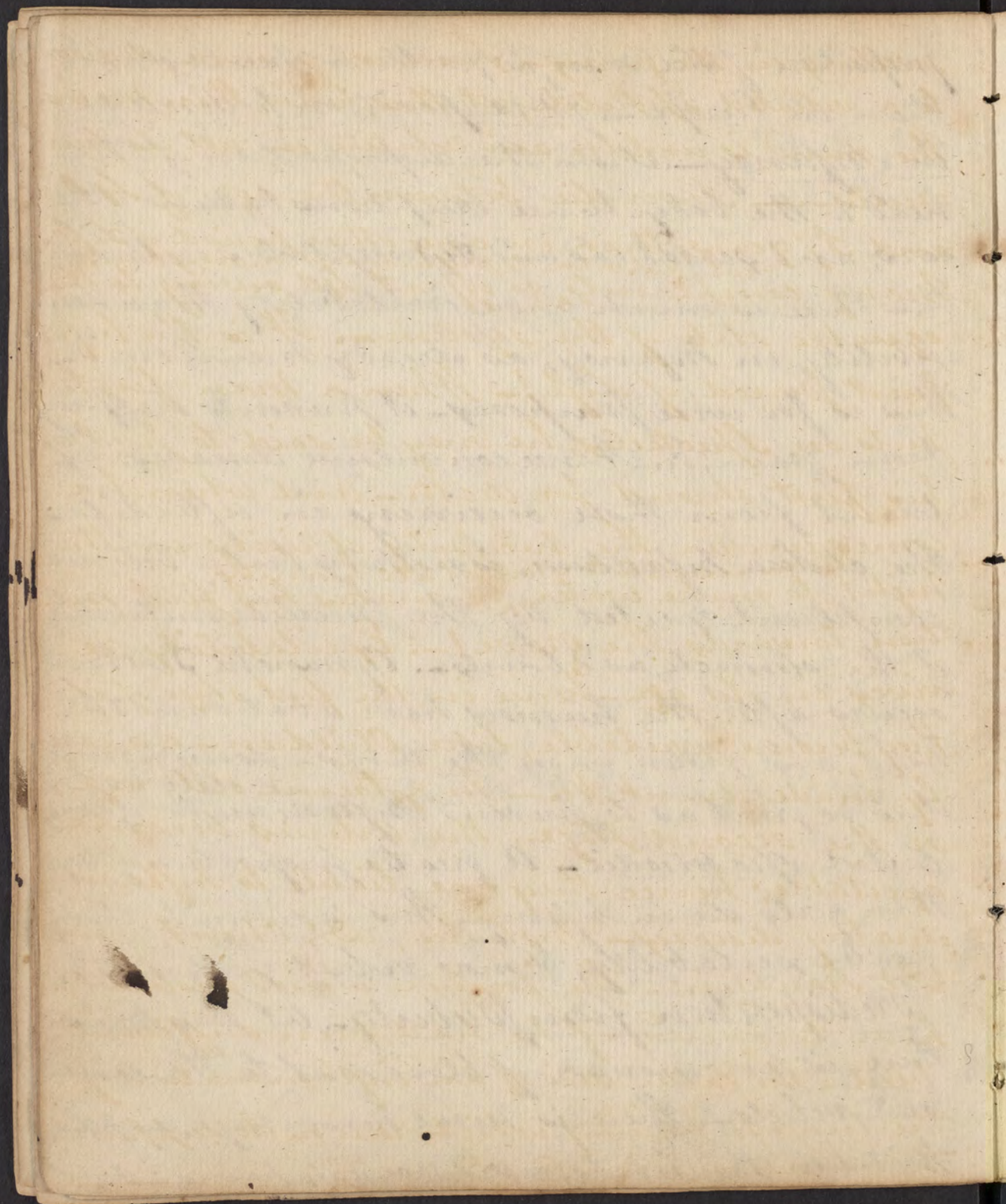


though separated from his Father by the ocean, was sensible of his death at the moment he died.— What is that unknown web that connects us? There are so many well-attested facts on this subject, that I must, says Dr. R. however contrary to my inclination, admit them.— I have only related facts to you, Gentlemen,— I leave them with you.— Love of Ancestors— Examples in the Old Testament— Dr. R. has seen instances enough to confirm it.— He knew an instance of a man who, in his sickness expressed the fondest sentiments of affection for his father, and wished to be interred by his side.— He did not appear to possess this affection before, and lost it after, his illness.— Antipathy— Peter the Great, was born with an Antipathy to Water; so much so, that when going to cross it, he would wrap himself up, and tumble headlong into the boat.— Some are born with Antipathies to cats, rats, &c.— Antipathies are acquired by satiety— By association, depending upon the object being formerly combined with fear.— King James had an Antipathy to swords, from seeing ^{his mother seeing} a horrid murder con-

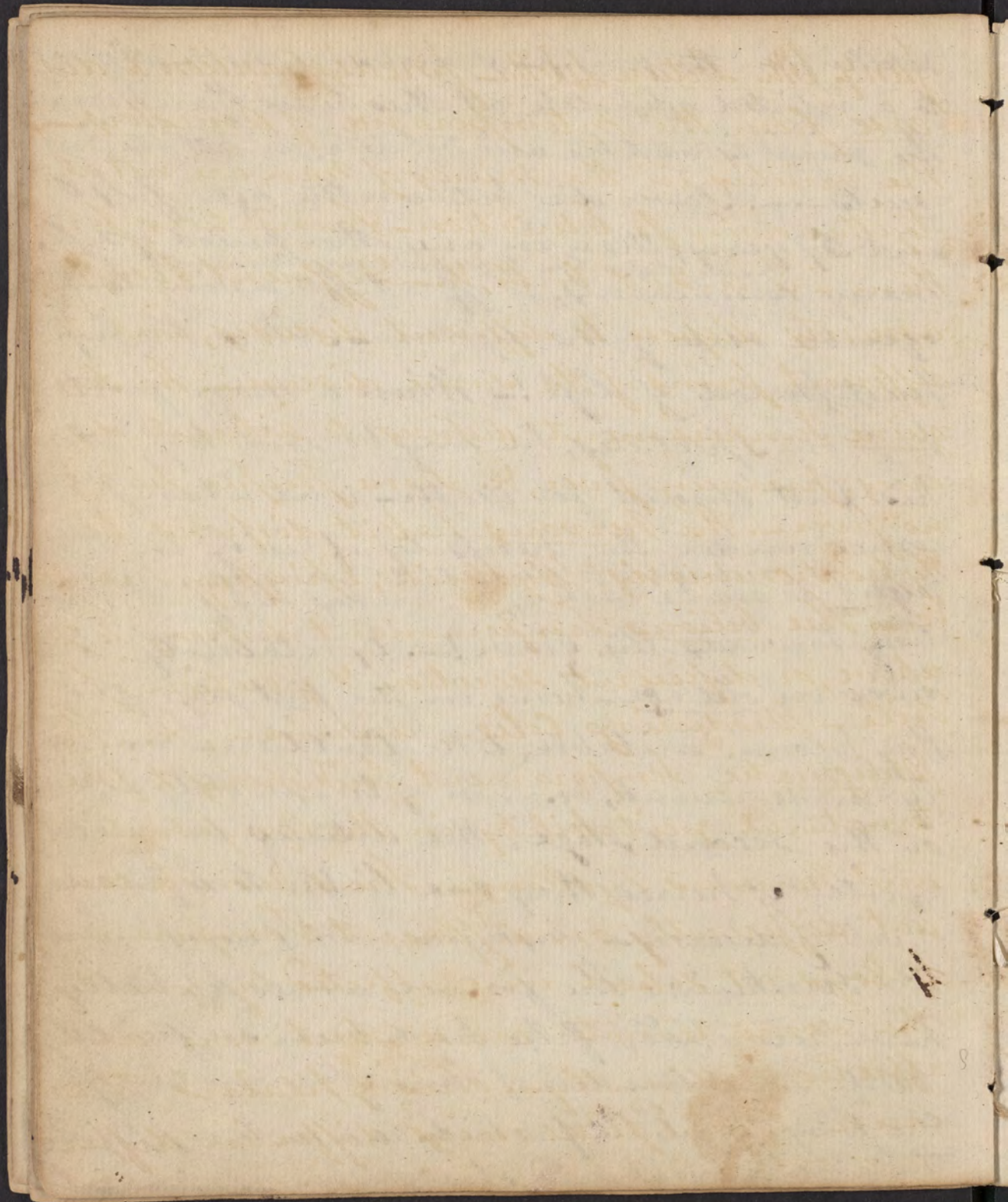


stabled while pregnant with him?
committed with one when a child? Associations of
Ideas, have a powerful effect upon the body. They
are of immense use in practice. Association in
other forms - as urinating at bed time, &c.
A Lady who was a great snuffer, on becoming
crazy still retained the operation of her fingers
to her ^{when her nose was stimulated with Volatile Salts, &c.} Nose. Hence Periodical fevers, and Epilepsy
may be accounted for. Nausea is induced by the
sight of a cup which formerly contained nau-
seating medicines. Hence the good effects of a
change of objects. Hence, if this Theory be correct,
we may account for all periodical diseases. A
Lady of Delaware state got rid of a periodical
disease by changing her residence - &c. Accidents.
Dr. R. only takes notice of the distance of time
between the accident & consequent disease -
Hydrocephalus has not made its appearance
for 8, ^{& even 13} months after a blow on the head. A
stroke on the back produced an Ulcer 4 months
afterwards. Contusions on the Head should
always be early and carefully attended to.
More Women become old than Men - but there
are more Men who live to be very old. The
Major

Proportion of old men is greater in New England than in Europe. Predisposition to disease in Infancy. From the disproportion of the head to the body - hence eruptions behind the ears, and scald-head, and Hydrocephalus internus, &c. - There is much more irritability than sensibility, in Infancy, as already mentioned - This is for wise purposes - it prevents suffering from pain, &c. - hence convulsive diseases; different from those occurring in after life. The cholera Infantum, is nothing but a bilious complaint, excited by the peculiar irritability of the stomach, and bowels. Cynanche Trachealis occurs after the humors have abated in the head, and fallen upon the lungs - sometimes it is so great as to prevent Inflammation; ^{& effusion} hence called spasmodic - A greater proportion of boys than girls die in Infancy - This is owing to their greater excitability, & more violent exertions, &c. Predisposition from Puberty. At this period there is an increase of blood sent to the seminal vessels. There is nasal hemorrhage, dyspepsia, pains in the joints; called growing pains - Swell-

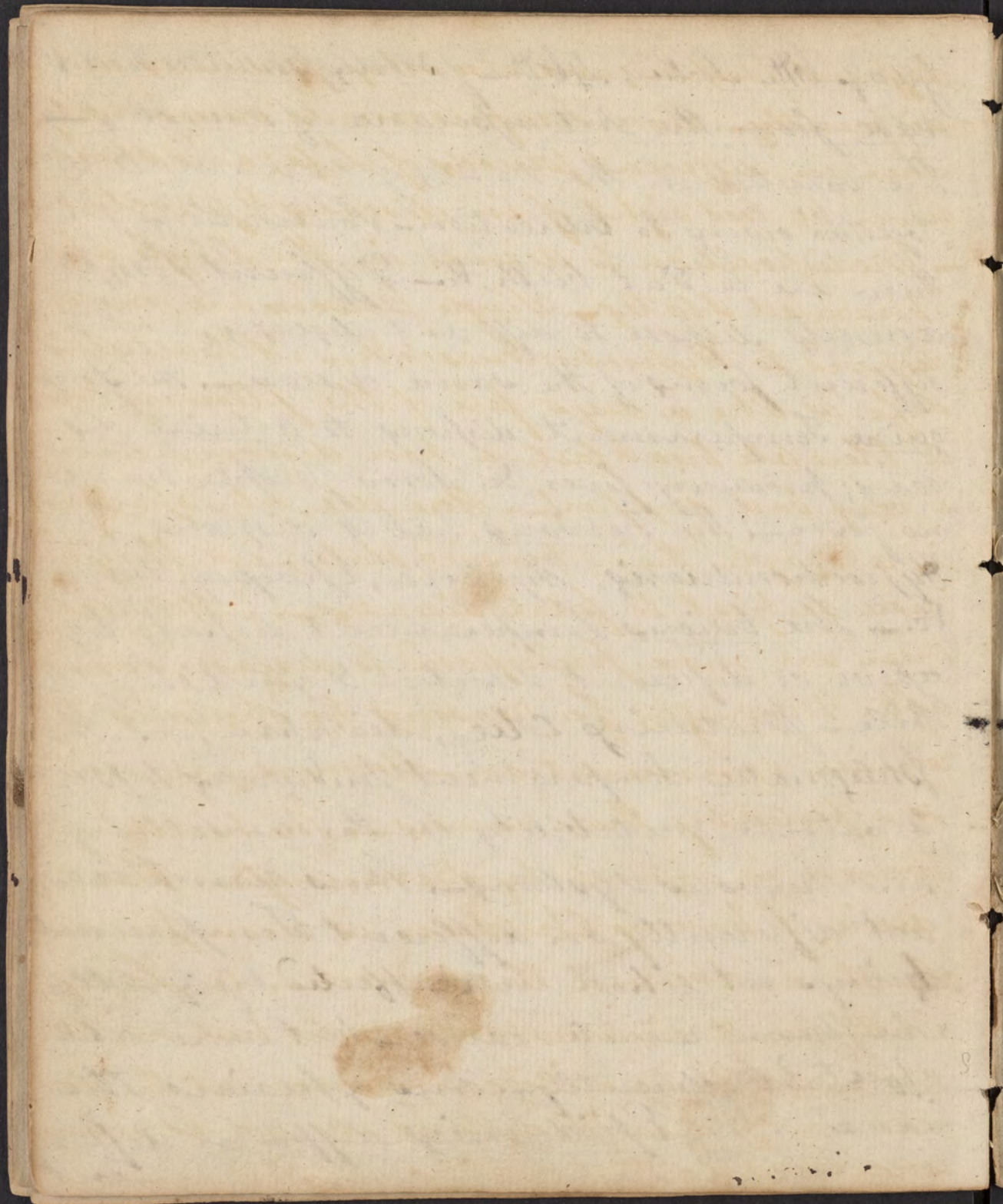


swelling in the groin - Females are more disposed
to a vitiated appetite, at this period, than Males.
The mind is unstable and volatile in all its pur-
suits - - - Fewer die between the age of 40
and 57 years, than in any other period of Life.
Many complaints, ^{& even disposition to Pulmonary Consumption.} go off at 40 owing to the
equable state of the system - It is the hap-
piest period of Life! - When a man first
puts on Spectacles, he may be said to put on
his first shroud for death - And when he
comes under the necessity of rising in the
night to make water, ^{from inability to retain it till morning,} he makes his first mo-
tion towards the grave! - Excitability re-
vives in old age - hence in the first stage of it,
they become irritable, like Children - are easi-
ly made drunk, &c. - In extreme old age,
or the second stage, the Arteries become
excitable; hence they are liable to Inflam-
matory diseases - Instance, Dr. Chevet, and
Dr. Franklin; - The former would probably
have recovered, if he had been sufficiently
bled - The latter died of an inflammation of
the lungs / or pleura? / which ran on to suppuration,
the abscess burst and strangled him -



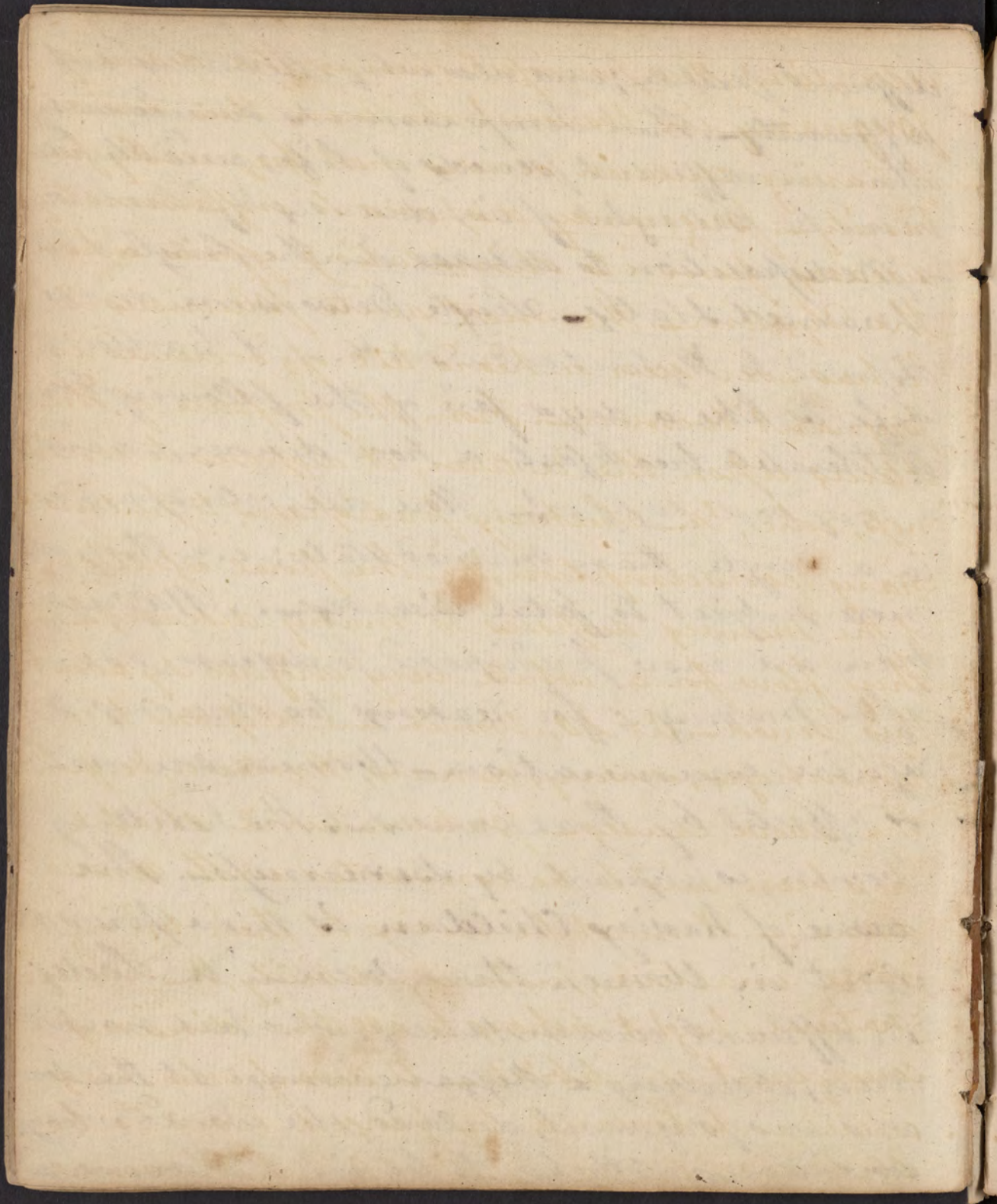
Jan^y 6th. Lecture 46th.— Predisposition to dis-
ease from the Intemperance of Ancestors—

The varieties in the minds of men are not al-
together owing to Education—Foundations for
them are laid at birth, &c.—Different Temper-
aments dispose to different diseases, and to
different forms of the same disease—The San-
guine Temperament disposes to arterial dis-
eases; producing fever, &c. Some people have
no fever—The nervous habit disposes to
Hypochondriasis, Hysteria, Epilepsy, Mania,
&c.—The bilious Temperament disposes to ex-
cessive, or deficient secretion & excretion of
Bile—Producing Colic, diarrhoea, &c.—The
Phlegmatic Temperament predisposes to pre-
ternatural excitability in the lymphatic,
and nervous systems—Thus remote causes
act differently on different Temperaments—
4 Boys at school were affected by exactly
the same remote cause—but were all
affected differently—This explains the
cause why Epidemics differ in differ-
ent

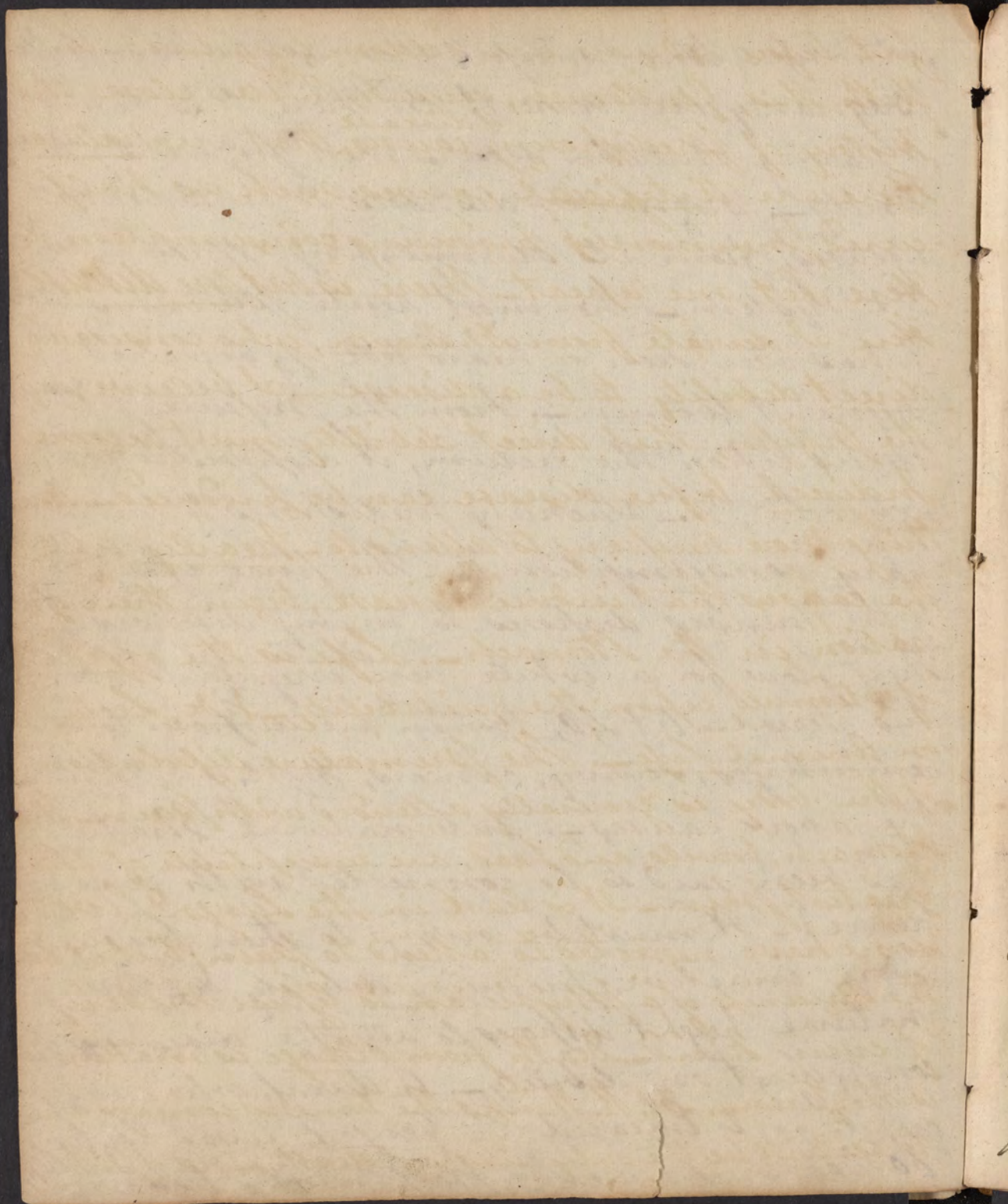


different people; and also why Medicines act differently. Those Temperaments succeed each other in different periods of Life; and should never be lost sight of in diseases & practice.

— Predisposition to disease in the Single and Married States. Single persons are more disposed to Hypochondriasis, &c. — A Bachelor's Life is like a days fare of the following kind, a tolerable breakfast, — a poor dinner, — and a very bad supper! — More die, ceteris paribus, in a single than married state; — i.e. they are more subject to fatal diseases. — Married Men are more predisposed to disease, soon after marriage; for reasons too obvious to require enumeration — Women are not so affected by those causes. — The health of Women is injured by Barrenness. — The desire of having Children is more prevalent in Women than Men. — A Lady in affluent circumstances, who had no children, observing a Beggar-woman at the door who was pregnant, declared she would exchange conditions with her to be in the same si-

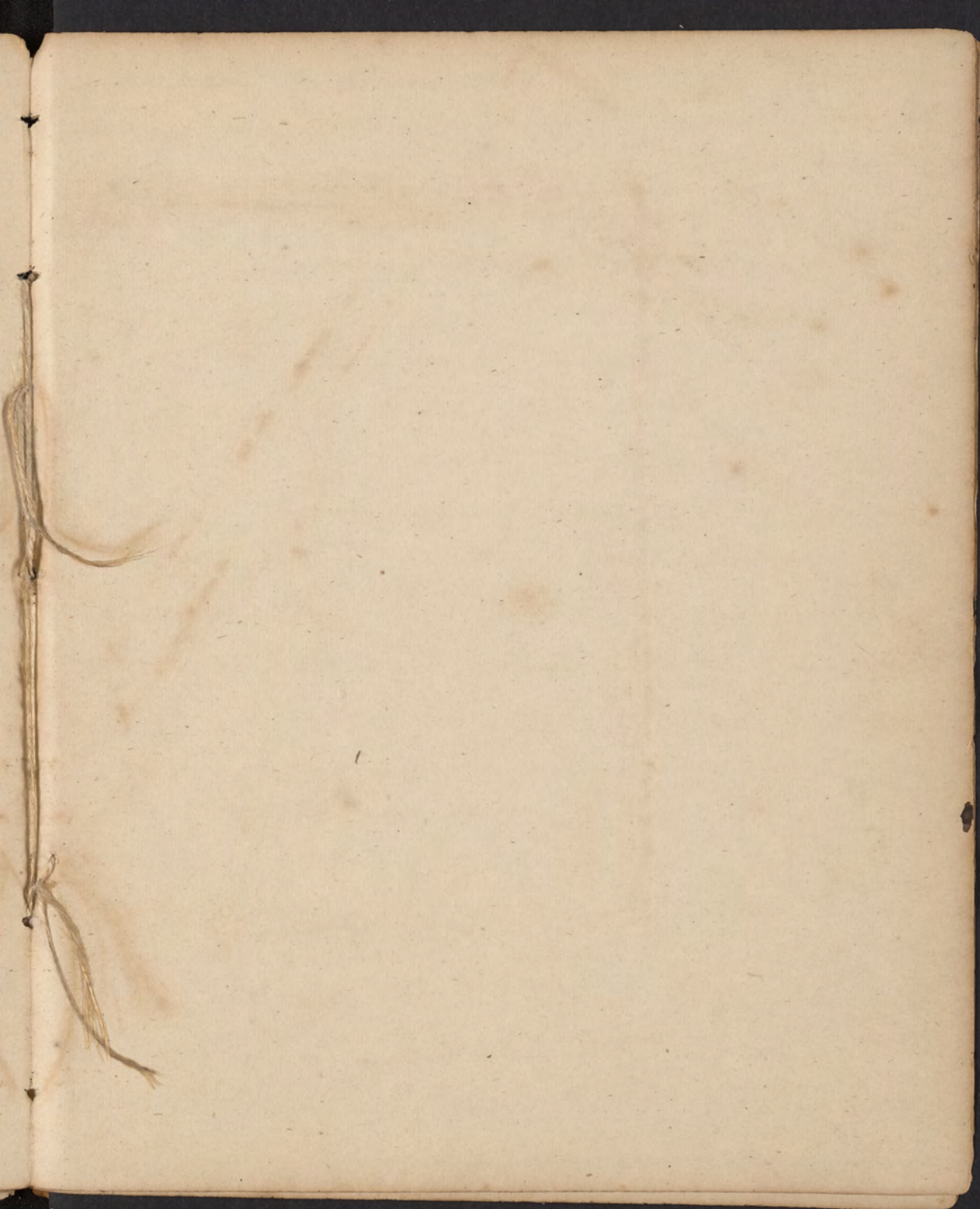


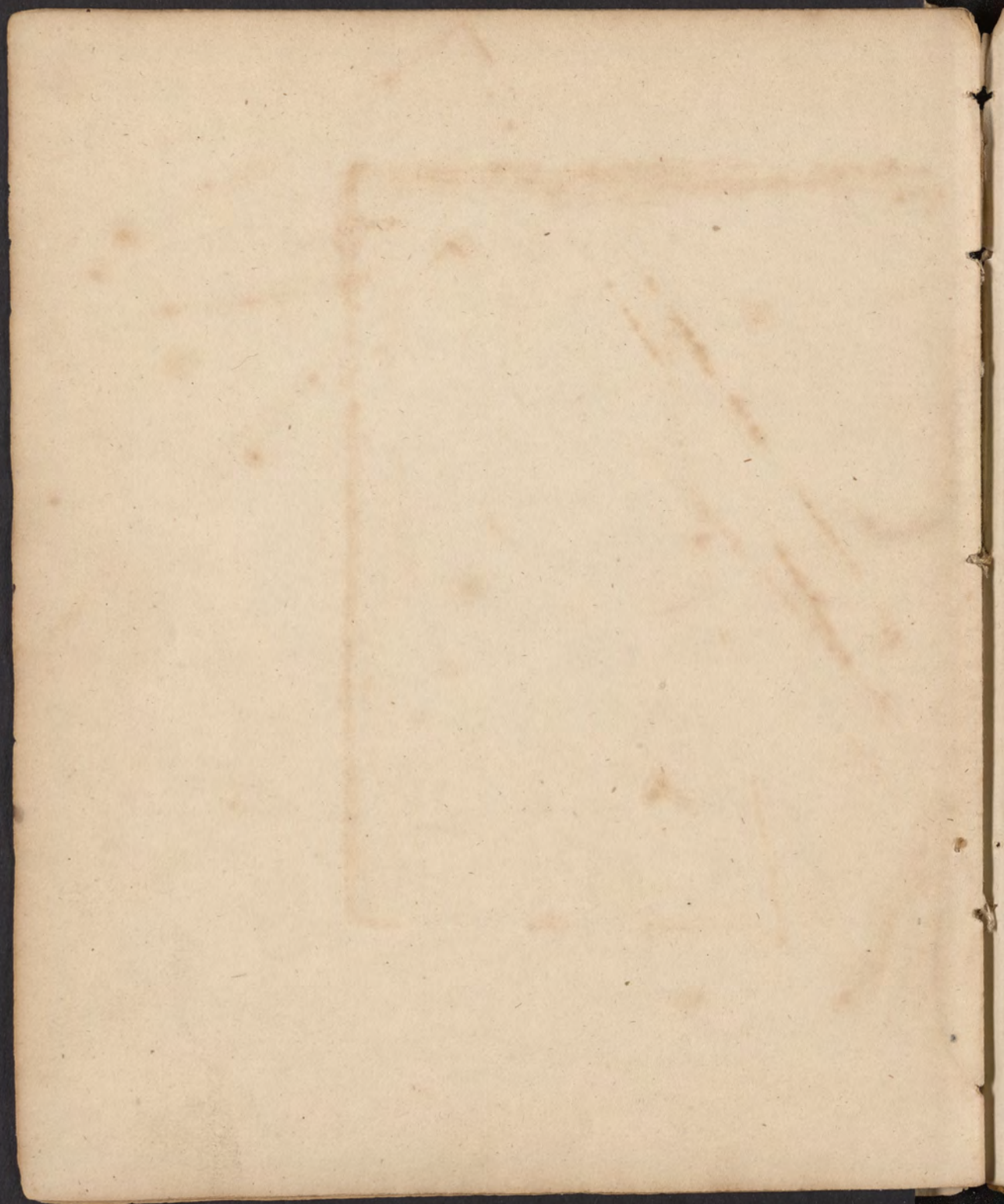
situation! How powerful then, is the desire of pregnancy in women! In men, this desire of having children occurs most frequently from vanity—Pregnancy disposes to inflammatory diseases, from its stimulating effects upon the system—The most acute Pleuritis Dr. R. has ever seen or heard tell of, occurred in pregnant women—From the pressure of the uterus upon the rectum, it disposes to costiveness, colic, &c.—Suckling predisposes to pulmonary consumption, &c.—The final cessation of the menses disposes to many diseases—They flow for a while very irregularly about this period—At 40, women are disposed to colic, hemorrhages, scurvy, cancers, Hysteria, &c. from the above causes—Preternatural shape has been said to be connected with venereal desire?—It must be owing to their being more inactive; producing debility, &c.—Preternatural height disposes to all the diseases consequent on debility—A dwarf, who was carried into England by George I. lived to be 80 years of age—People who become

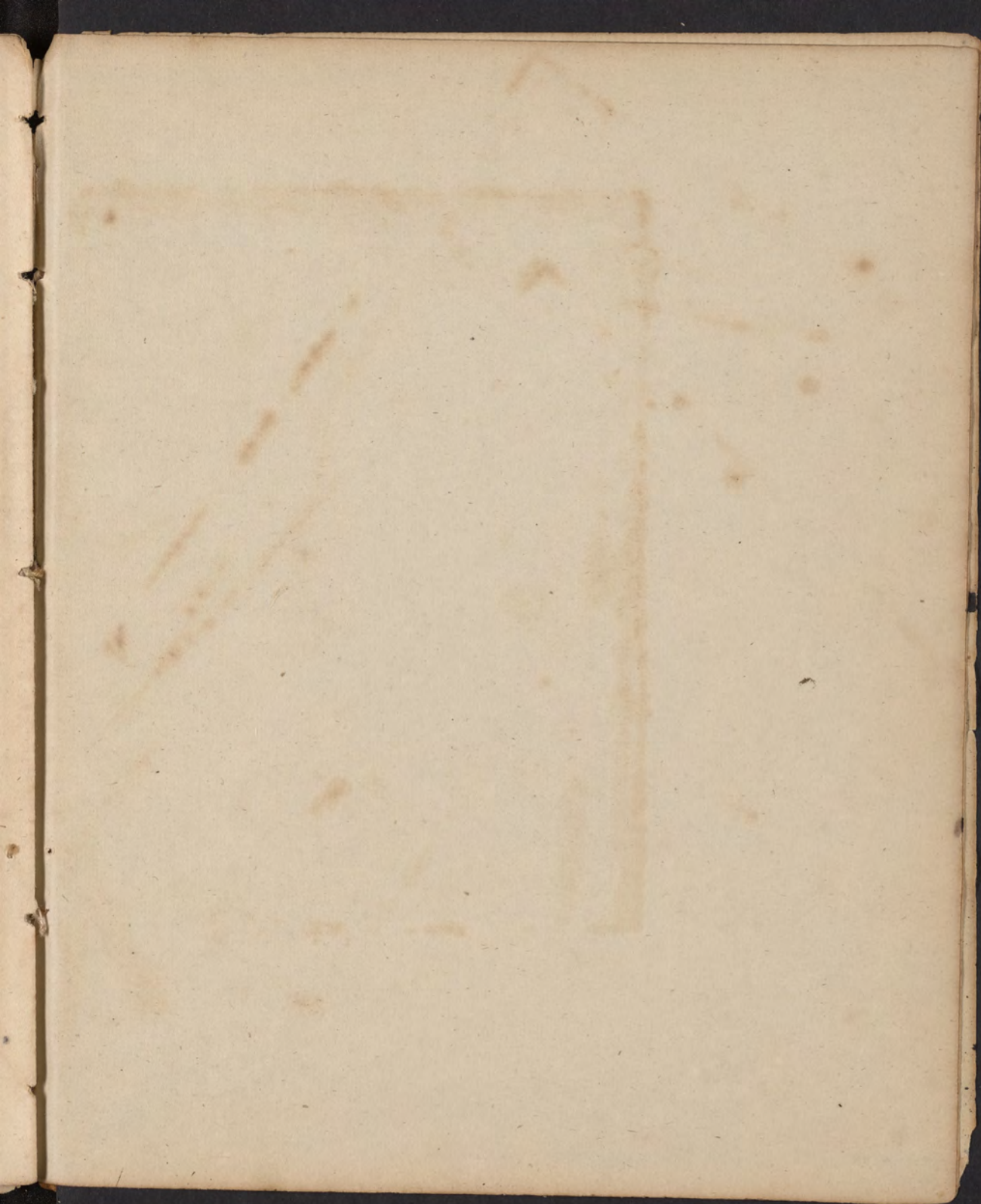


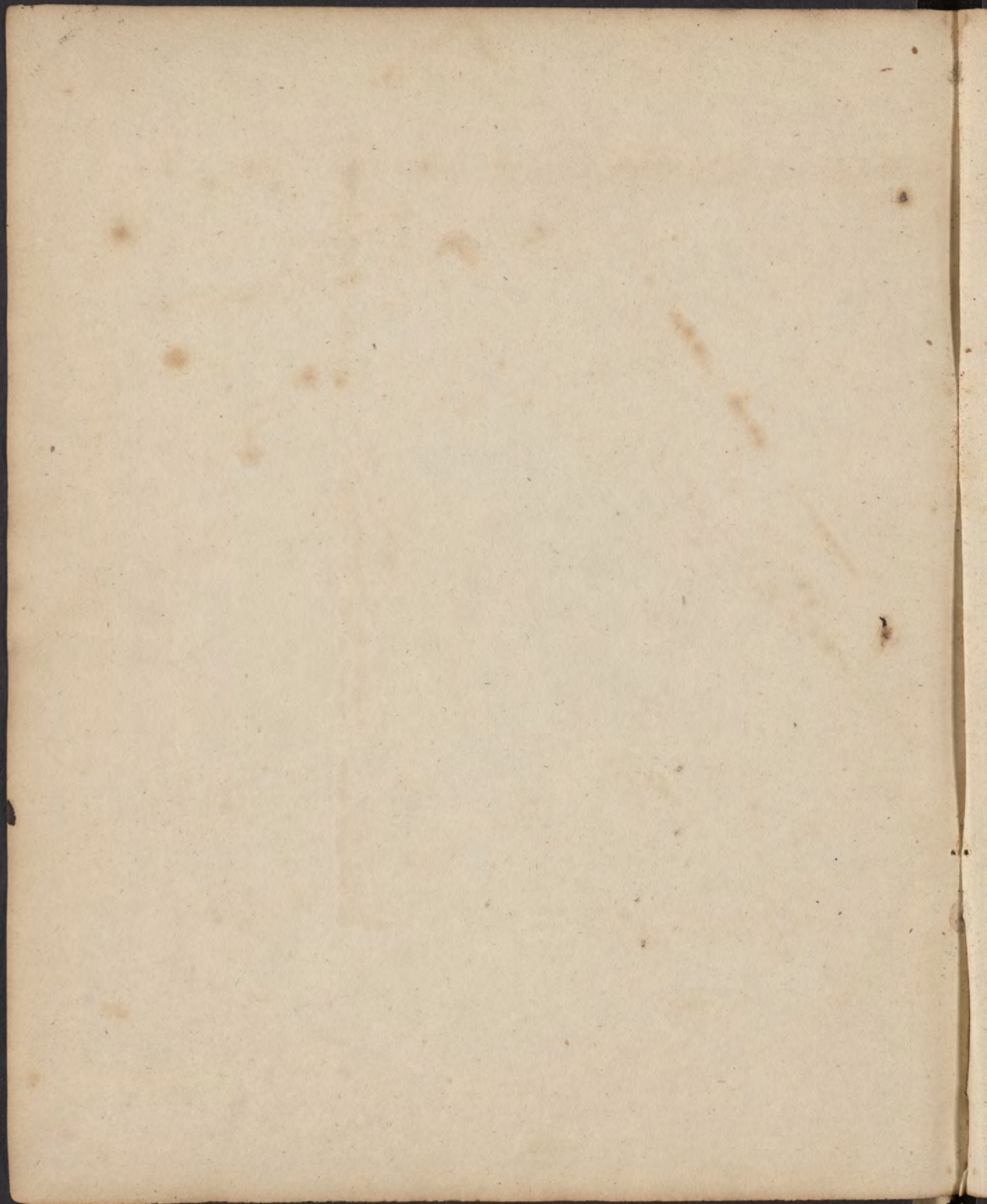
fat before 40 years, are seldom long-lived - &c. &c.
With this, Gentlemen, says Dr. R. We close the
History of Predisposing causes, ^{of disease} that are Natural.
There are Artificial causes; such as half-
-cured Pneumonies producing consumption, &c.
Here let me repeat - There is but one disease!
Here I deviate from Dr. Brown, who considered
direct debility to be a disease - I believe, says
the Professor, that direct debility must become
Indirect before disease can be produced - One
thing more necessary to attend to - Nearly all
the causes that induce disease, begin their ge-
neration in the Stomach - Life is the effect
of stimuli upon the excitability - Vide, Lectures
on Animal Life - The premature dissolution
of the body is generally attended with pain - The
Stomach, bowels, and head, are susceptible of the
greatest pain - It is least in the Lungs & Liver.
Some have neglected to attend to pain; but it is
the Business of a Physician to lessen Misery
of every kind - Death from old age is unattended
with pain - Dr. R. thinks the time is coming when
old age will be the only cause of death. End of Pathology

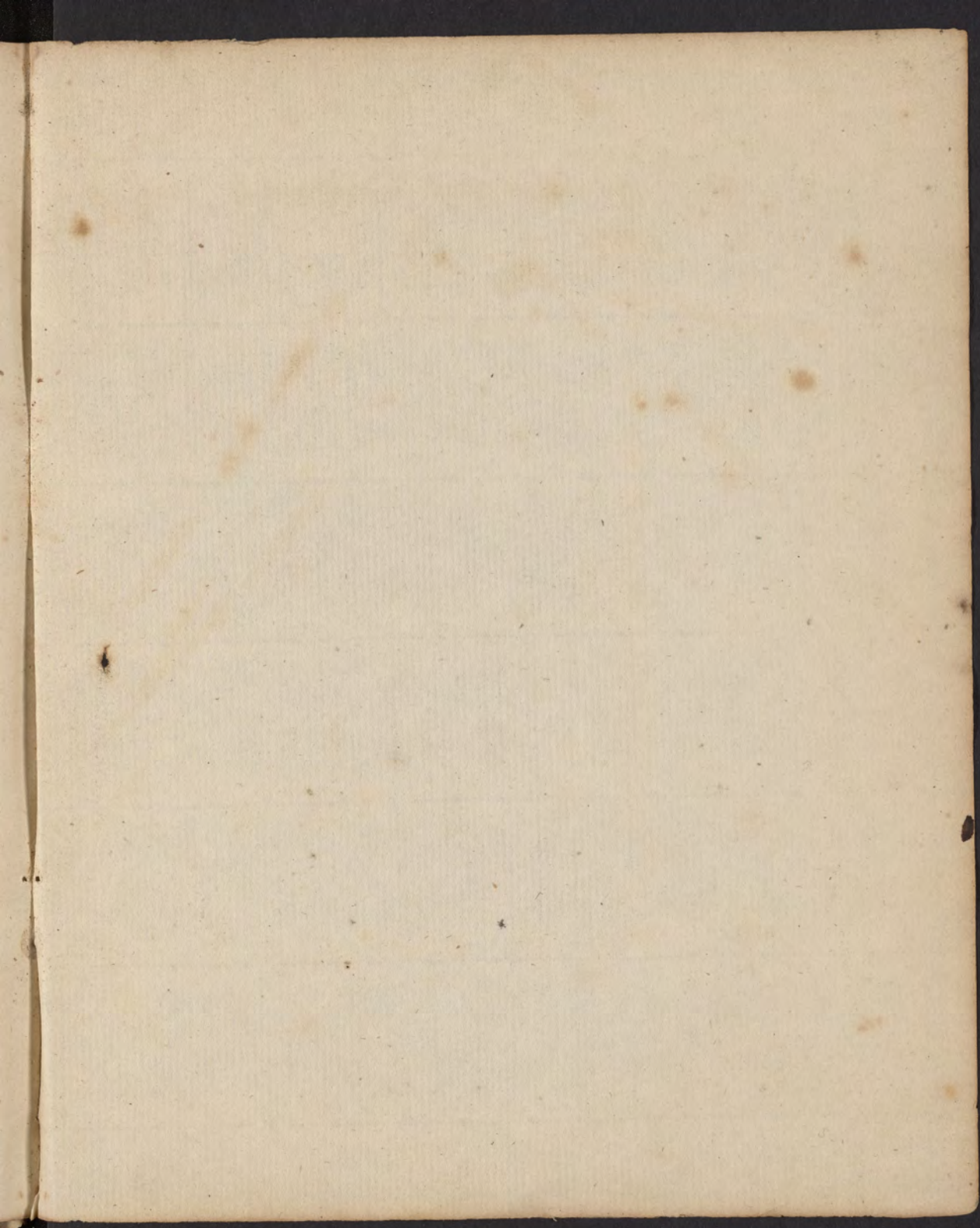
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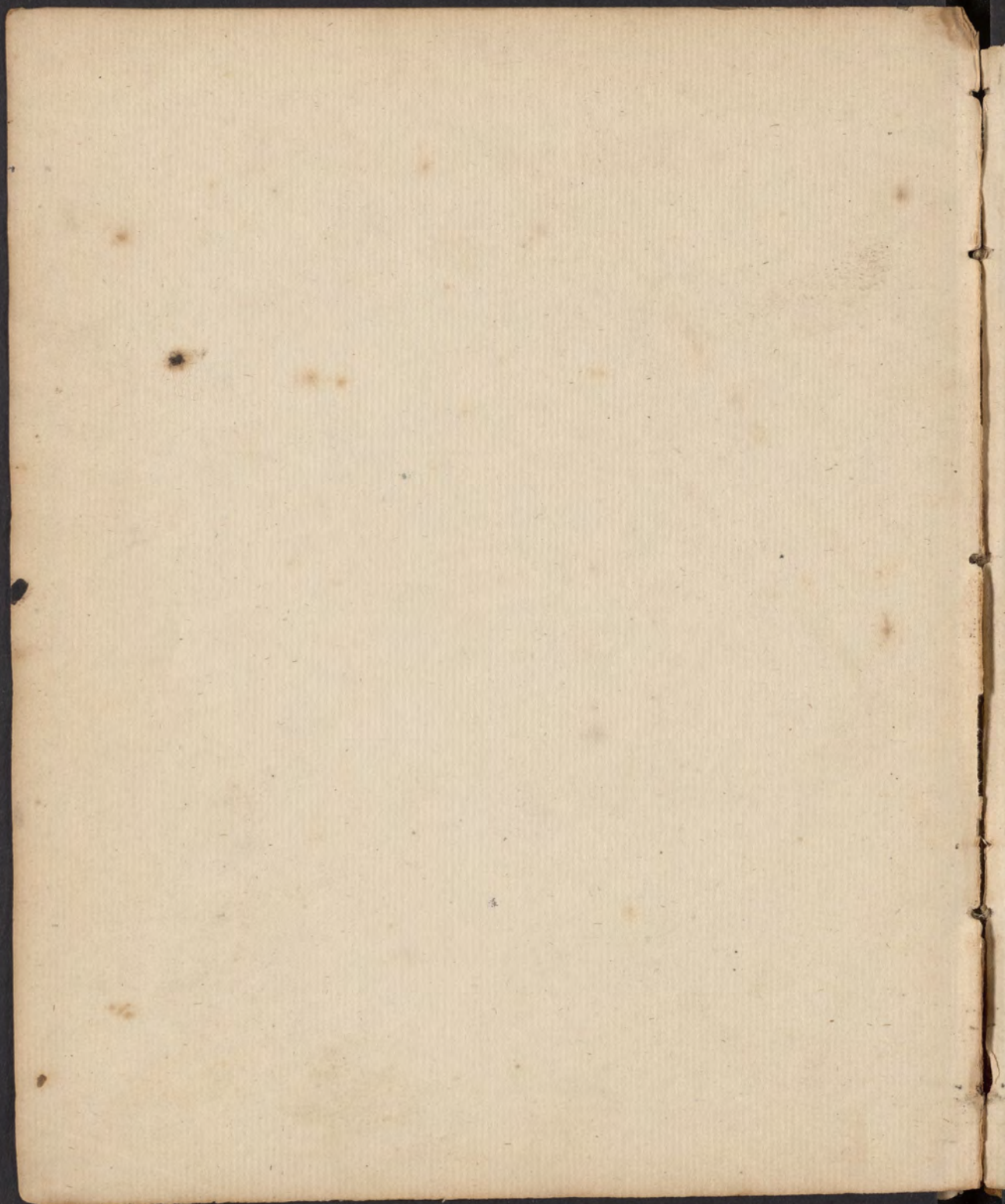


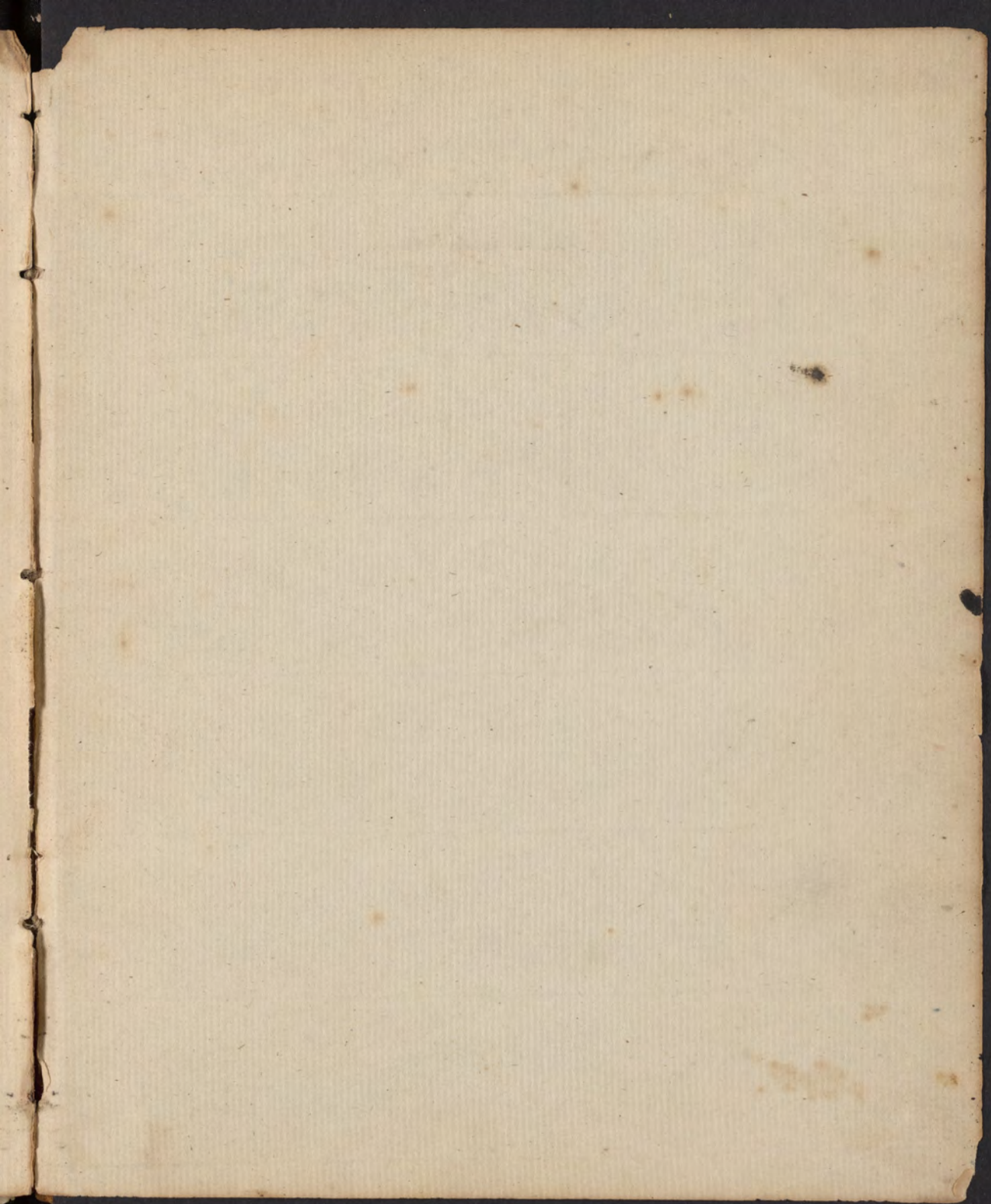












Dr Benjamin Aisk

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